DOCUMENT RESUME

ED 026 027 56 HE 000 537

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Learning and Student Interaction in Small Self-Directed College Groups. Final Report.

Hope Coll., Holland, Mich.

Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.

Bureau No-BR-7-E-020

Pub Date Jun 68

Grant-OEG-3-7-070020-2667

Note-78p.

EDRS Price MF-$0.50 HC-$4.00

Descriptors-Classroom Techniques, College Students, *Experimental Programs, *Higher Education, *Interaction Process Analysis, Learning Activities, *Learning Processes, Learning Theories, *Self Directed Classrooms, Small Group Instruction

In a self-directed student group, learning activities are controlled and directed by the students themselves. This approach to learning was investigated at Hope College to: (1) explore the amount and patterns of interaction observable in small self-directed groups, (2) assess conditions and events in group interaction which enhance or inhibit learning, and (3) assess other desirable learning outcomes besides course achievement which accompany this approach to learning. All 54 students enrolled in the social psychology course in the 1966 fall semester were randomly divided into groups of 6 to study independently. Following initial pre-testing, course instructions, and distribution of course materials, students were dismissed for the semester except for voluntary group meetings once a week or more and total class meetings with the instructor approximately once every 2 weeks. From behind a one-way mirror the instructor made observations of the groups in action and student assistants conducted Bales Interaction Process Analyses. With other groups in the second semester different categories were used for the interaction analysis and groups were videotaped. It was observed that interaction was plentiful and effective, that there were identifiable factors enhancing or hindering learning, and that the benefits of self-directed study extend beyond the content learning achieved. Findings confirmed the value and productivity of this approach to college learning, and indicated the feasibility of its economy in terms of instructor time and required classroom facilities. (Author/WM)

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BR 7-E-020
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OE-BR

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
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HE000537

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LEARNING AND STUDENT INTERACTION IN SMALL SELF-DIRECTED COLLEGE GROUPS

Leslie R. Beach

Hope College

Holland, Michigan

June, 1968

The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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Preface

This is an age of experimentation and innovation in social science where the small interactive human group is coming into its own. For the first time, we are realizing something of the force and the value which lie in the resources of a small group of intelligent adults thrown into close, continuing encounter with one another. Developments in applied group dynamics and group therapy have led the way, and the recent experimentation with self-directed therapy groups at the Western Behavioral Sciences Institute at LaJolla presents still a further application of the best principles of the small interactive group at work.

In recent years we have seen the potential which the small interactive group has in education, for one significant function which the small group serves is to enhance growth in learning. When the searching and sharing activity of such a group is primarily self-directed, i.e., controlled and directed by the members themselves, the stage is set well for learning to occur. Recent experimentation in college learning has involved this kind of instructorless or self-directed study group. The general picture presented by this form of study is that of a small group of college students, usually about a half-dozen, meeting together periodically and quite informally to discuss subject matter in a course which may be structured and outlined to a greater or lesser degree. Contact with the instructor during the course is limited. Typically, the general course of study or the body of material to which the group is to be exposed is outlined in some sort of course syllabus and includes a textbook or specified reading material.

The technique is not widely reported, despite the fact that educators, social psychologists, and group dynamicists in particular, have been pointing out for some time that growth and learning may be greatly enhanced and made more permanent through group interaction. It has been well established, for example, that definite benefits accrue from group-discussion as opposed to formalized lecture instruction. (Birney and McKeachie, 1955.)

Educators need to know more about how students learn from each other and from learning experiences in which they have an active part and assume responsibility for their learning. Patton has found that where students assumed responsibility for classroom experience (reading to be done, class procedure, written work and method of grading), as compared with a control group, they felt that the course was more valuable and they showed greater interest in the course content. Moreover, the degree to which the student accepted responsibility was positively correlated with gain in knowledge of the subject matter and gain in ability to apply the principles studied. (Patton, 1955.)

The small student group, studying quite independently of formalized instruction, can achieve objectives which cannot be achieved in larger groups or lecture settings. As Bruce Dearing says,

> ...small-group independent study seeks to capitalize on the gains that can be achieved from small-group process and interaction. In effect, small-group independent study seeks to place the student in a new kind of "environmental press" in learning. It is a "press" which, in the very nature of its situation, and the kind of responsibilities for learning it imposes on the student, seeks to involve the student in a more intimate and direct way with the materials to be learned, than might be the case were he only to hear or read about the subject. (Baskin, 1965, ch. 3)

A fuller rationale tying the use of the self-directed learning group to established principles of the psychology of learning appears in Beach's writings elsewhere. (Beach, 1965, 52-59)

Findings such as Patton's, coupled with the research on group discussion as an effective instructional method and the group dynamics research on the productivity and behavior change in participative groups, suggest a positive value in the applications of these principles to college-level learning. Learning here is not to be construed as mere achievement in the course measured by class tests, but rather, total performance on all desirable outcomes of a learning experience. Examples of such added outcomes are: outside material read in conjunction with the course, quantity and quality of study invested in the course, satisfaction gleaned from the learning experience, stimulation of critical thinking, and actuation of further learning.

INTRODUCTORY SECTION

Summary

This is an investigation into the use of self directed small groups as an approach to college teaching and learning. The value of the discussion group has long been established but there is need for further investigation into the potential of the self-directed student group in which the students themselves take on a major responsibility for their learning and pursue study together in their small groups with relatively little contact with the instructor, except on a periodic and more personalized basis.

The present study is exploratory, following a similar pilot study completed earlier by the principal investigator and building on some related work done by other investigators. All students enrolled in the social psychology course at Hope College for the fall semester, 1966, were randomly divided into groups of six members each and, being given a structure and syllabus for the course material to be covered, were instructed to work on their own in their small groups, meeting a minimum of once each week and meeting as a total class approximately once every two weeks with the instructor. There were other opportunities for conferences with the instructor during an "open house" afternoon each week and any time "by appointment."

Major objectives for the study were to investigate the nature of the interaction in the small learning groups, to discover what types of activities were helpful and what was harmful to learning in the small interactive group, and to assess other possible desirable outcomes which might result from this approach to learning. An effort was made to study many variables and their interrelationships in the areas of attitudes or feelings about this experience and performance or productivity in a course conducted in this manner.

In general the findings on achievement in the course were satisfactory. The experimental students did not perform as well as a control group under conventional classroom lecture-discussion instruction but achievement was certainly satisfactory. Study and observation made of a sampling of the small-group meetings resulted in valuable insights regarding the type and amount of interaction and some of the factors which tended to enhance or inhibit learning. Study of a number of other desirable outcomes of college learning showed that there was a great interlacing of positive results of this experience on the part of the student. Student reaction and feedback was, in general, very positive and their estimates of the quality of their total learning and growth from the experience were noteworthy.

Especially among such variables as amount and variety of interaction within the small groups, individual feelings about the other members of the small group and toward the meetings, overall value of

the course, satisfaction with the course, general reaction to the total semester's experience, growth in interest in the subject matter studied, estimate of knowledge gained in the course, critical thinking done in the course, and grasping implications and applications of the course material, there was a great interweaving of positive reactions and positive assessed outcomes which make the self-directed approach to college learning and this investigation, in particular, most worthwhile. These additional desired outcomes of a college course besides mere content achievement suggest that more investigation is needed to discover the extent to which such outcomes are possible and realized both in this type of course and in any approach employed in college teaching.

Introduction

The interest of the author in the experimental use of self-directed learning groups sprang from an investigation at the University of Michigan (Beach, 1960) in which the members of small independent study groups achieved highly on course examinations.

A subsequent pilot study at Whitworth College employed self-directed student groups in an undergraduate social psychology course. Data from this experiment indicated no significant difference in achievement in the course between the experimental self-directed groups and students in control groups attending classroom lectures and discussion in a traditional fashion. Analysis of the findings on "other desirable outcomes" of the course experience, however, showed that the experimental group out-performaned the classroom group at several points. Significant differences favoring the experimental group appeared in both quantity and quality of study for the course, amount of reading done in conjunction with the course (both required and non-required), and library materials consulted in writing papers for the course. Differences in student ratings on the value of the course and in amount of "general reading" done related to this course favored the experimental group, but these differences did not reach a level of statistical significance.

A noteworthy point of these findings appeared to be the fact that the students in the experimental self-directed study groups did not suffer in course content learning from being deprived of the classroom and being placed in the interactive, instructorless learning setting. Furthermore, they appeared to have profited more in terms of "other desirable outcomes" in the course and found the group experience rewarding and satisfying.

Results similar to those found by the author are reported by Hovey, Gruber and Terrell (1963). In an educational psychology class at the University of Colorado these investigators matched a self-directed study group with a lecture group in aptitude. Then the self-directed group was broken into small groups of 5 or 6 students who met in the small groups two days a week and with the instructor one day a week. The meeting with the instructor was concerned with problems in group functioning and questions on course content.

In this study the self-directed study group was slightly but insignificantly superior to the lecture group in achievement on the final exam and on final course grades. A similar pattern was found on a retention test administered ten months later. The self-directed study group did a significantly greater amount of "serious reading" to increase their knowledge following the course experience. They suffered no loss in retention, compared with a control lecture group and also showed small but persistent superiority on indices of curiosity. The practical significance of this last finding is described by Gruber and Weitman as follows:

> Surely a major goal of education is to stimulate the student to further pursuit of knowledge on his own initiative, after the compulsions of the classroom are far behind. Curiosity may be said to have a "gate-keeper" function in the educational system: if the system arouses further exploratory or re-organizing behaviors, it may set off a process which is self-sustaining and which may in large part determine the whole character and direction of the individual's future life. (Gruber and Weitman, 1962, p. 3-3.)

These investigators concluded that placing a major responsibility on the student for his own education has interesting possibilities for developing attitudes toward learning which result in the student's continuing search for knowledge after the formal classroom experience is over.

Dr. Neil Webb and his associates at St. Norbert College are in the midst of a series of studies using similar techniques, with the addition of instructor prepared questions serving as guides to student-led discussions of course content. Webb reports that students feel the student-led discussion provides a more free and relaxed atmosphere for discussion, makes them feel less inhibited in asking questions and in challenging statements of others, and causes course material to become clearer when it is translated into the words of fellow students and illustrated by student examples. Instructors of the courses involved report that the student-led discussions enhance student involvement, interest and enthusiasm. Students ask more questions and the "laws of small group activity" require articulation of thoughts and enhance their learning from each other. (Webb, mimeo)

Another series of studies employing such small groups has been conducted over recent years by Dr. Clarence Leuba at Antioch College (1964). Leuba's approach in his introductory psychology class has differed somewhat from the Whitworth and Colorado pattern in that his groups have usually been a little larger (8-10) and his procedure has been more structured. He helps each group get established and select a leader and a closer contact with the instructor is maintained. Leuba has also introduced some innovations that may prove particularly useful in analyzing the group process whereby the most effective learning takes place. To begin with the students at Antioch are given a manual designed to help them develop productive group activity toward educational ends. The groups have usually met at the same time and all in the same building. Through an arrangement permitting auditory contact with the groups, the instructor can "tune in" on the groups while they are in session or receive questions which they may wish to address to him in the course of their group meetings. Some of the group sessions have been taped for further analysis of the discussion itself.

A significant contribution made by Dr. Leuba's work is his defining of the role of the instructor in this kind of learning situation. Whether it is done in the more direct manner as at Antioch, or in more indirect ways, an important role of the instructor working with self-directed student groups always is to help them with some of the mechanics of becoming effective functioning groups. In the Whitworth groups the leadership within the group as well as the manner in which the group functioned was left up to the group to work out. Leaving them entirely on their own did lead to considerable "lost time" in some cases.

These studies all seem to indicate clearly that self-directed small group study does not result in any decrement in subject matter mastery in the college learning experience. Furthermore, a number of measurable benefits appear in terms of other desirable outcomes of the overall course experience. To summarize, such educational resultants as interest in reading material related to the course and its assignments, quantity and quality of study invested in the course, increased communicative and interpersonal skills, sense of independence and responsibility in one's own growth and learning, greater enthusiasm for the learning experience, and lasting curiosity aroused by the learning, all appear persistently in favor of the self-directed student groups.

While the present investigation attempts to build upon the findings of these previous studies, it must still be considered primarily an exploratory study. The primary objectives of this investigation are: (1) to explore the kinds and patterns of interaction observable in small student group engaged in self-directed study and learning activities, (2) to gain new insights into those occurrences in the group interaction which appear to either enhance or inhibit learning, and (3) to assess other desirable learning outcomes (in addition to achievement in course content) which accompany this approach to college learning.

Methods

General procedure for self-directed group study

All students enrolled in the social psychology course at Hope College in the fall semester, 1966, were involved in the present investigation. There were fifty-four students in this experimental group. Forty-one students enrolled in two sections of social psychology (one in the preceding semester and one in the semester following the experiment) comprised a control group for purposes of measured achievement in the course. This is the only purpose for which the control group was used.

Procedure during experimental semester.

At the beginning of the experimental course all students met for several class periods for preliminary testing and for general instructions as to how they were to proceed throughout the semester. They were required to purchase the text for the course and were given a syllabus stating the objectives of the course, outlining the course and indicating appropriate readings in the text and in outside sources, both required and additional suggested reading. (See Appendix A.)

Students were also given a General Instruction Sheet (see Appendix B) which introduced the reader to the concept of self-directed small-group study and outlined the procedure to be followed during the semester. In discussing the self-directed group approach to college teaching/learning, attention was given to the role of the student, the role of the professor, and the role of the small group. The requirements of the course and the procedure for determining the final grade in the course were also given in the instruction sheet.

In addition to the printed form of instructions, detailed outlining of the procedure for the semester was given in class with opportunity for the students to ask any questions they wished. The major roles of the student were described as involving the major responsibility for one's own learning throughout the semester and becoming and being an effective member of one's group.

Approximately every two weeks a meeting of the entire group was scheduled with the professor but these were the only so-called class meetings to be held. Further contact with the professor was provided by declaring one afternoon each week a sort of "professor's open house" when the professor was available to talk with any class members, individually or in groups, who wished to come in. It was an open house in the sense that anyone and everyone was free to come and go as they pleased and talk with the professor themselves about anything related to the course or otherwise or they could simply listen to the discussion going on if others were having discussion with the professor. The professor was available other times "by appointment." The point was made that this was to be one of the advantages of being released from the regular three-days-a-week class meetings. Contact with the professor could be more flexible and more personalized.

Requirements of the course were outlined as follows: (1) taking responsibility for relatively independent study throughout the semester, (2) taking the pre-tests at the beginning of the course and the post-tests at the end (given during the last week of the semester and at final exam time), (3) attendance at weekly meetings of the student's small group and filling out the "Small Group Meeting Report" (see Appendix C) following each small-group meeting and turning it in at the professor's office, and (4) a written paper or special project due toward the end of the semester.

The final grade in the course was based on four factors. Forty-five per cent (45%) of the grade was determined by performance on the final comprehensive examination covering all required readings. Fifteen per cent (15%) of the grade was earned on the term paper or special project. Twenty per cent (20%) of the grade came from an evaluation made of the individual by the other members of his small group with whom he worked through the semester. The final twenty per cent (20%) of the grade was determined by a self-evaluation of the person's own growth and performance throughout the semester. It was explained that some criteria would be provided to help in making the evaluations of themselves and each other and that since the emphasis was to be on self-growth and self-directed learning, they were in a better position to judge some outcomes of the course than the professor.

Another piece of material handed out at the beginning of the course was a "Manual for Self-Directed Study Groups." (See Appendix D.) This was a brief three-page manual intended to help those uninitiated to work in small groups to become effective group members and contributed to the effectiveness of the group's functioning. Covered in the manual were such topics as the value of an atmosphere conducive to growth, importance of active participation in discussion, need to prepare for group sessions, making discussion pertinent and meaningful, listening carefully to others, possible need for a discussion leader, dealing with group problems which may arise, and a general pattern of how a good discussion might go.

Following instructions and the handing out of all course materials and the administering of a pre-course questionnaire (see Appendix E), the total enrollees were divided randomly into nine groups of six each and dismissed for the remainder of the semester, except for the periodic voluntary class sessions, being required to reappear only during the final week. The manner in which the students were to proceed in covering the material, the pace at which they would work, the sequence they would follow, and all such decisions were left up to each group to determine for themselves within the general framework of weekly meetings and the course syllabus.

Methods for gathering pertinent data

General information regarding the individual student and about his relationship to the course and the experiment was gathered through two questionnaires, one administered at the beginning of the course and another administered at the end.

Data on achievement in the course were obtained through the use of comprehensive pre- and post-tests employing the same questions covering the textbook and other required readings in the course. The exam consisted of one hundred multiple choice items which had been subjected to an item analysis in previous classes to insure their appropriateness and discriminatory power.

Two other psychological tests were employed: (1) the Brown-Holtzman Survey of Study Habits and Attitudes and (2) the Watson-Glazer Critical Thinking Appraisal. These were used to obtain more objective information in areas where there might possibly be some measurable changes occuring during the semester.

Information and data regarding the small groups in action were obtained by scheduling approximately one-third of the small group meetings in an observation room equipped with a one-way mirror. The students were fully informed of this and its purpose, viz., to discover the type of thing going on in the small self-directed group in action and how learning might be enhanced through observations made. While there was a little concern over being observed, the groups quickly overcame any self-consciousness and, from all appearances and through their own testimony, seemed not to be bothered about meeting in the observation room. From behind the one-way mirror the professor made observations on the group which was meeting on any particular day at the scheduled time (usually scheduled at the time the class would normally meet so all members would have the time free). Also from behind the one-way mirror two student assistants, trained in the technique, took observations and records of the interaction process using the Bales Interaction Process Analysis technique and the Bales recorder. These observations provided a great deal of information on proceedings in the small groups.

As will be reported in the Addendum to the findings of this investigation some further techniques were employed in observing small groups in action during the second semester with another class. While the first semester group was the group involved in this project, some worthwhile things could be carried further during the second semester with different groups. The Bales categories were found to be rather inapplicable to this type of group (study-learning groups) so a new set of categories for describing group interaction were developed which seemed more appropriate for this kind of group. This is reported on later. Also during the second semester it was possible to videotape from behind the one-way mirror all the small group meetings held in the observation room. This was invaluable in permitting a re-viewing of each group's interaction and discussion to study more precisely just what enhanced and what inhibited learning in the small-group. In fact it is even possible to see what leads up to and promotes learning "breakthroughs" or new insights among group members. This, too, will be reported on further in the Addendum section of the findings.

Student reaction and feedback concerning the course, the experiences in the group and the general experience in self-directed study were most important. Data on these reactions were gathered primarily from two sources: (1) the post meeting reaction reports turned in following each small-group meetings, and (2) questions asked on the end-of-course questionnaire. Some feedback also came directly and orally from the groups, from individual conferences and class meetings held throughout the semester.

Every effort was made to gather as much pertinent information as feasible. While some of it has to be analyzed and interpreted somewhat subjectively much of it is subject to quantification and conversion into a form amenable to computerized statistical analysis. Wherever possible data were put in a form which could be coded for computer analysis.

Findings and Analysis

Description of Method of Analysis

As the discussion of method has just indicated, some of the pertinent and useful data gathered in this investigation necessarily had to be observational data and they could not all be quantified for precise statistical analyses. However, wherever possible statistical analysis of data has been conducted and is reported as such.

Appropriate tests were used to assess the statistical significance of the quantified findings of the study. Chi square (X^2) analyses were employed where the data were in the form of discrete categories and the variables, therefore, not continuous. A contingency coefficient (C) is sometimes included with chi square where it helps give a further indication of the relationship between the two variables in question. While C cannot be interpreted in the same way as the correlation coefficient, it does give a similar type of guide to the relationship found in the data.

Where appropriate the product moment correlation coefficient (r) was used to show the relationship between two continuous variables and the extent of their co-variation. A guide to the interpretation of r is that a coefficient as large as .27 is considered significant at the .05 level of confidence and a coefficient as large as .35 is considered significant at the .01 level of confidence.

Where groups or two measures may be meaningfully compared by determining the significance of the difference between their means Fisher's t ratio has been employed as the statistic to test that difference.

For the interpretation of X^2s and t's the .05 level of confidence is generally adopted in this report for statistical significance. However, since all tests are two-tailed, anything significant at the .10 level of confidence is included in the event a one-tailed test might be employed in testing hypotheses in future studies. While not significant statistically, any test significant beyond the .20 probability level is reported so that trends may be observed which, again, may be useful in establishing hypotheses for testing in future studies. Since this is an exploratory investigation, this practice is considered appropriate.

Findings on Achievement

Achievement in the experimental course in social psychology is in terms of course content measured by the comprehensive 100-item multiple choice exam administered at the beginning and at the end of the course. Table 1 below gives the means and standard deviations for the experimental and control groups for pre-test scores, post-test scores and achievement gain.

Table 1

Means and Standard Deviations on Course Achievement Scores

	Pre-test		Post-test		Achievement gain	
	mean	s.d.	mean	s.d.	mean	s.d.
Experimental group	41.4	6.9	60.6	9.8	19.2	10.1
Control group	41.8	4.9	66.5	8.9	24.7	8.8

For the experimental group the difference between the means of the pre-test and the post-test is significant far beyond the .001 level of confidence (correlated $t = 13.92$).

For the control group (comprised of two sections of the course taught prior to and following the experimental semester) taught in traditional lecture-discussion classroom fashion, the difference between the means of the pre-test and the post-test is also significant far beyond the .001 level of confidence (correlated $t = 18.03$).

While the experimental group and control group did not differ on the pre-test scores, there was a significant difference ($t - 2.992$, p .01) between means on the post-test favoring the control group. The same significance was found ($t = 2.758$, p .01) between means on the post-test favoring the control group. Studies have consistently shown no significant difference on such comparisons, but in this case the control group's higher post-test mean (by 6 points) and higher mean gain (by 5.5 points) is most likely due to the fact that the classroom presentations and discussions were quite closely geared to the text material; providing additional reinforcement of the learned content which the comprehensive exam covered. In fact, it is somewhat surprising that there was not a larger difference in achievement gain between experimental and control Ss under these conditions. (It is noted parenthetically that in previous pilot studies, the author has never found any significant difference between experimental and control Ss. Sometimes the slight difference found has favored the controls and sometimes it has favored the experimental Ss.)

In any event, from his experience using the achievement exam with other classes, the course instructor feels that the achievement of the experimental group was fully satisfactory.

Findings on Small-Group Interaction

Interaction within the small groups has been a matter of special concern in the present study. General observation has indicated that there was seldom any problem achieving informal and easy give-and-take in the groups. There were times when the interaction would be a little slow but there was rarely any real problem or feeling of awkwardness. The atmosphere was usually relaxed enough that there was no pressure to force interaction until the group or some individuals were ready for it and encouraged it. Probably the size of the groups had something to do with this ease and the amount of interaction. It is difficult to hide in a group of six and everyone got into the discussion at one point or another. Domination would also be difficult to get by with because it quickly became evident to all, including the dominator.

Early sessions dealt with getting acquainted, getting organized and determining procedure for group action and for moving through the material. There was great variety from group to group in degree and in quality of interaction. Also there was considerable variation from meeting to meeting, e.g., one member would seem to feel unusually "high" and this would affect the whole discussion, or there would be a Christmas party and that would dominate the hour's activity, or a meeting might be deadly dull when all or most members were not properly prepared to discuss the material. Sometimes interaction was rather severely handicapped by the group's preoccupation with the book before them.

In general, it was quite impressive the way material was made relevant through examples, shared experiences, interpretation of difficult concepts in their own language and other personalizing techniques.

Also observed was the rather superficial discussion where the members seemed to "quit on it too soon," yet on the other hand there were excellent discussions marked by good probing and pushing of concepts for deeper implications and more complex interpretations than the obvious. More will be said regarding this observation later in this report.

Even though the groups knew they were being observed from behind the one-way mirror, there was a general freedom, relaxed tone, and easy give-and-take which is rarely if ever present in the conventional classroom stiuation. This is felt to be a great advantage of the self-directed group, for the group members assume responsibility for their learning, yet it occurs in a friendly, relaxed and generally supportive atmosphere.

Findings provided by Bales interaction analyses

It was very valuable to obtain the recordings on the Bales recorder of the pattern and amount of interaction taking place in the observed small-group meetings. Over the semester from five to seven observations were obtained on each of the groups and these records were tabulated on summary sheets (see Appendix F) so that the picture of interaction in each meeting was evident. These records provided representative figures on the number of times each individual participated and a measure, too, of the variety of his comments.

Some problems with the Bales Interaction Process Analysis categories appeared fairly early in the experimental semester. There was quite a bunching of responses in the middle categories--especially categories 5 and 6 dealing with giving opinion and giving orientation. Other than category 7 dealing with asking for orientation, the whole bottom half of the Bales categories were little used. It was recognized that the Bales categories are designed for analyzing the interaction process in a problem-solving or decision-making type of discussion and not a learning discussion. Consequently, an effort was begun to develop new categories that would be more applicable to the learning-study type of discussion. When these categories were developed and tested, they were put to use during the second semester when another course using the self-directed groups was being studied. These new interaction categories will be discussed further in the Addendum section of the findings of this study.

In describing the interaction as recorded, it must be said that interaction was found to be good, as our general observations had already led us to believe. For example, the average number of participations per person per meeting was thirty-eight; this, in spite of the fact that a few of the meetings were short meetings. There was also quite good variety of comments made by each person. Even though certain types of remarks did not appear frequently there still was an average of five different types of remarks made by each person per meeting. Quantity of interaction and variety in interaction also were found to go together ($X^2 = 13.162$, $p < .001$; $C = .44$), all of which gives a picture of good, healthy interaction in the discussions.

Inspection of the tabulation sheets reveals quite a consistent pattern shown for each individual over the six or seven meetings observed. This individual consistency held for both quantity of their participation and its variety. Another obvious consistency was the pattern of the interaction for the total group. There was quite a striking similarity in the pattern of each tabulation sheet over the several observations taken through the semester.

Groups where quantity and variety of interaction were highest or lowest, tended also to be high or low, respectively, on attitudes toward the course and work done for the course. Reported reactions to group meetings were low where interaction ratings were low ($X^2 = 5.35$, $p < .08$) and of those high on interaction quantity, an especially high percentage were highly positive in their reaction to the group ($X^2 = 5.90$, $p < .06$). One other statistically significant finding was that those achieving more highly in the course were predominantly people showing high variety in interaction ($X^2 = 5.264$, $p < .03$).

Conditions and events enhancing or inhibiting learning

More specific observations were made in light of one of the major objectives of this study. A definite effort was made to discover those conditions and events which contribute to or enhance learning in this interactive setting of the small-group. Of like concern were those conditions and events which stood in the way of or interfered with learning. Following are some rather randomly selected examples of such conditions and events as they were actually observed.

Factors interfering with learning. These are conditions and events which interfered with or blocked progress in learning as things were going on in the group.

> Members of the group appeared overly eager to express themselves to the extent that there was little careful listening to others.
>
> This group is showing considerable tension in their interaction, blocking the best interpretations and give-and-take possible.
>
> Member #3 goes into extended relating of some personal experiences tangential to the discussion and the text material under discussion. Much time seems wasted on this.
>
> This group is moving very slowly today and there is apparently a very low level of involvement. No one seems particularly concerned over progress or productivity.
>
> Have noted that individuals show something akin to "lack of patience" when others don't see immediately something they, themselves, understand clearly. Consequently, even when considerate, the "knower" moves too fast or talks too loud in making his explanation. His being too forceful or too intense in getting the other to see his point, actually makes his efforts less fruitful.

Factors preventing learning from occurring at all. These are conditions and events which preclude and prevent the occurence of good learning conditions.

> This group shows more of an interchange or exchange of individual learnings (or their "pre-learnings"). There is little actual effort or desire to learn from what others have to day because each is eager to "say his own piece."
>
> Not all the group read the same material so there are long periods of silence after a question is raised while everyone reads the book or tries to get the point from the text to help in clarification.
>
> In many respects this session appears more like a study session than a discussion. Members are quite oriented to the book before them and this focus on the book makes interaction minimal!
>
> Clear example here of superficial discussion (which happens fairly frequently). Members don't always dig for the fullest or truest meaning of terms or concepts. They don't keep looking for better interpretation or additional alternatives or additional hypotheses or examples..."quit on it too soon."
>
> Another example of "quitting on it." When questions are raised and answers are attempted both questioner and answerer quit too soon before a good clarification and explanation is realized. They seem to assume some things are understood that may not be--or they do not admit it when something is not fully understood. Yet the facial expression indicates there is still puzzlement.
>
> Am impressed with the very little amount of challenging of one another's position--even when it is not a very strong position expressed.
>
> This group is active but there is considerable digression, tension release in the form of wise cracking and horseplay... much "escape behavior."
>
> Little evidence of any reading or study outside of text--even when they don't understand a concept, there is no particular effort to pursue it further or elsewhere; it is just dropped.

In summary, it appears from these observations that students do need some guiding and further understanding about just how learning takes place and what kinds of things are necessary for one to grasp a concept of idea with which he is unfamiliar. Many of the blocks to learning and interference with learning in progress seem to come from the students either being too oriented to their own personal knowledge or viewpoint to effectively interact with another person on the issue or else not understanding how best to lead another person to a new insight or express himself in such a way that he can effectively communicate his own insight.

Factors in group's interaction enhancing learning. These are examples of conditions and events related to the interaction itself which help the group or individuals learn better and gain new insights.

Applications of the readings are well made by this group, i.e., they interpret the material by using themselves as an example.

This group make applications well in terms of their own experiences which they then share. References made to groups and organizations they have been in or observed, sociograms done by them or on them, etc. Good examples shared.

This group shows good effort to push beyond the immediate point in the study material and go deeper into more general and/or more basic issues and questions to which it points.

Members in this group don't seem to mind saying they don't understand a term--as is so often the case in the classroom. (I often ask in class if there are questions on this particular subject--defense mechanisms--and almost without exception, time after time, they have none. The test always proves they really did not understand the terms at the time.)

Various members of this group cite terms with which they have trouble and then ask others for illustrations of them or inquire what the meaning or implications of the term might be.

Once in a while someone in this group raises the question as to the relevance today of some of the older studies cited in the text material. This is fruitfully discussed--often with the result that the relevancy becomes apparent. This could likely never be accomplished in class by the instructor.

A very good instance in this meeting of person A helping person B understand what person C is saying--when persons A and C have trouble communicating.

Factors regarding the group's procedure or modus operandi enhancing learning. These are conditions and events having to do with the group's manner of functioning or covering the material which seem to help learning take place more effectively.

There is a leader in this group and he starts right in by inquiring what group members have "written down" on sections of the chapter. This makes it obvious that this group has each member bring, in writing, his comments, questions and insights for the group discussion.

This group meeting begins by member #5 presenting an outline of the chapter for the benefit of the others and for discussion.

Meeting opens with some initial evaluation of themselves and their own functioning as a group. A number of ideas are brought up as to how they may become more effective in their group discussions and overcome some of the problems they have had.

This group had an evaluation at the end of their meeting aimed at finding things they could do better next time.

This group does spend time focusing on the text but they seem to do it for purposes of determining finer discriminations and sharpening their thinking and learnings on difficult concepts.

Miscellaneous factors enhancing learning. These are conditions and events which contributed significantly to the atmosphere or the functioning of the group to make learning more likely or more effective.

This group stopped to have a discussion with professor after their meeting. Some very good points were discussed regarding what education and learning are all about and how this approach through self-directed learning fits in. There seemed to be alleviation of some anxieties and concerns and a clearer understanding of the objectives of this experimental approach to college learning.

Group brought a small decorative Christmas tree for the center of the table. Some also came in with popcorn balls and other "goodies" and a carton of Coke. This contributed much to levity, Christmas spirit and feelings of cohesiveness and solidarity in the group. There was also some very good pertinent discussion in the latter part of the hour.

Special observation concerning group member #2. Have had her in class before but I have never seen her perform as well as she does in this discussion situation.

Following some initial discussion the group distributed copies of a sample mid-term exam that had been made available for study or "practice." This group decided to use it as a review. It also happened that in the process of discussing why certain alternatives were chosen as the best answer, group members were helping each other learn how better to take multiple choice tests!

Just as the observations of factors inhibiting learning seemed to focus on preoccupation with one's own interests and problems in helping lead another person into a new learning or insight, so these factors which appeared to enhance learning focus quite a bit on events and conditions in which group members are more other-oriented and do take the time either to contribute something special by way of explanations or examples to other group members or to contribute something to the group itself and the social-emotional climate of the meeting.

These observations are helpful not only in determining what kinds of instructions and guides might be given to help small-groups avoid blocks and learn better. They are also helpful in enhancing opportunity and the conditions for learning in the classroom. These are examples of things seen to get in the way of learning or prevent it from ever happening at all. They also illustrate some things which lead directly to new insights and seeing of new relationships and new meanings. Any classroom teacher might well profit from careful study of these observations.

Findings Concerning Student Reaction and Feedback

The primary sources of student reaction to the small-group learning experience were post meeting reaction sheets which were filled out following each small-group meeting, the post-course questionnaire, and direct comments made to the instructor in conference or in a group meeting.

Post meeting reaction sheets

The PMR sheets were filled out and turned in following each small-group meeting (see Appendix C). From these a running record was obtained of individual reactions to the group and to the meetings. Other identifying data were included which helped "keep track of" groups, their meeting times and places, and the individual members present at each meeting.

A method was devised for assigning ratings to the comments on feelings toward the group and toward the meetings so that these PMR's could be quantified for individuals and/or groups.

When the PMR's for a group are averaged for each meeting, the results can be graphed to show the average reaction or tone within the group meeting by meeting throughout the semester. This has been done and the resulting graphs do show great variation, with random ups and downs prevalent. However, there was something of a pattern established over the semester which is shown in the "smoothed" graphs below.

On the "feelings toward the group" item, groups tended to start high with apparent feelings of anticipation, congeniality and cooperation. At about the third or fourth meeting dips occurred, usually followed by a recovery during the fifth to eighth meetings. During the ninth to eleventh meetings feelings toward the group then dropped as mid-term sag, anticipation of Christmas vacation and veneer-less interaction undoubtedly all affected the reactions. Then, almost without exception, feelings became more positive and the graph takes an upward swing usually surpassing the beginning point. Most members are feeling quite positive about their groups by the end of the semester. Indeed, many expressed a sadness and reluctance to see the group break up.

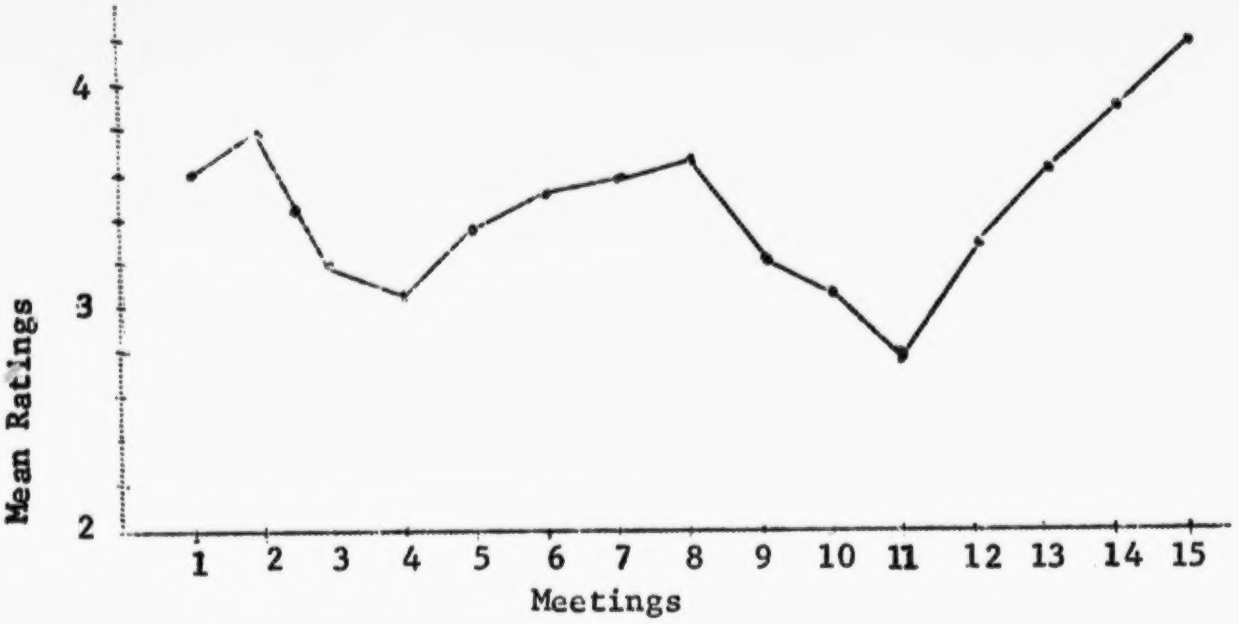

Fig. 1 Pattern of Typical Feelings toward Group

On the "How do you feel about this meeting?" item, the picture is similar but not exactly the same. All feel good about the meetings at first, some groups even surging upward the second meeting. After the third to fifth meetings considerable luster is lost as the meetings, marked by some floundering and lack of structure, seem to leave something to be desired. This period is followed by a general upward swing as the group takes hold and the meetings seem to get better. The sixth, seventh, eighth and ninth meetings show reactions zig-zagging up and down as some go well and others poorly. At about the tenth or eleventh meeting a typical downward plunge begins and most members seem quite discouraged and negative over their meetings. Again, however, perhaps now that Christmas vacation is over and "the end draweth nigh," an upsurge in the feeling tone comes as the final meetings apparently go off more satisfactorily, and the end is frequently better than the beginning.

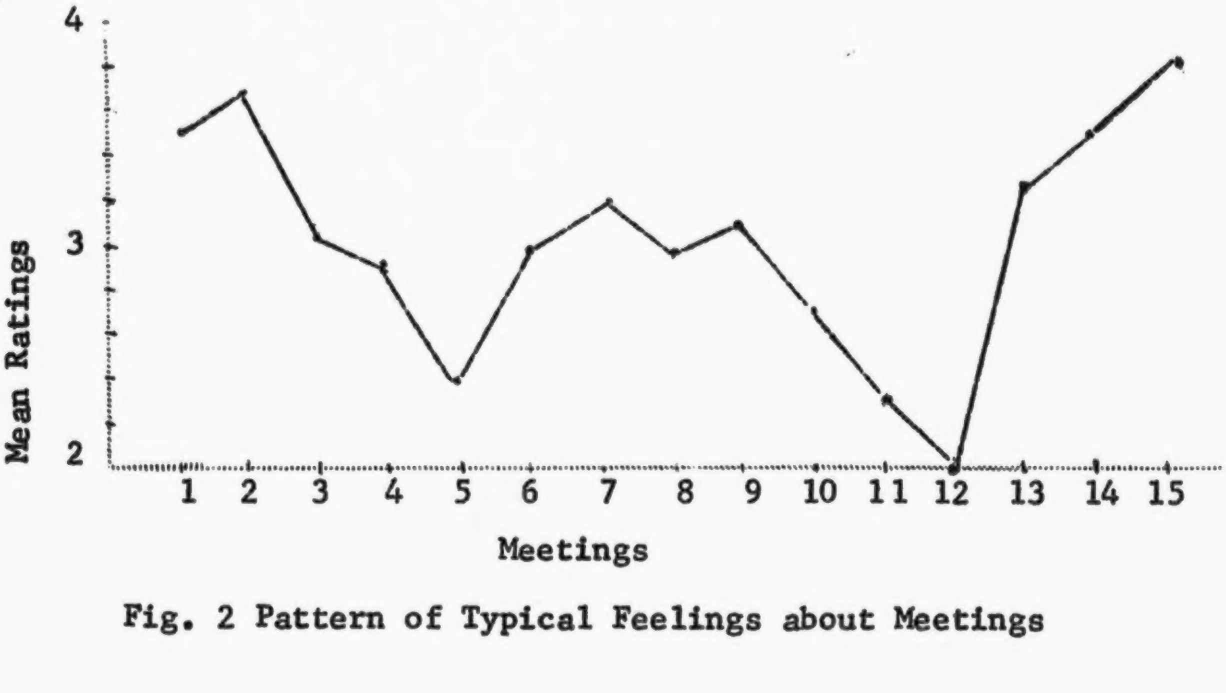

Fig. 2 Pattern of Typical Feelings about Meetings

A general observation on what can be gathered from these PMR sheet data, is that both in terms of feelings toward the group and feelings toward the latest meeting, there is a general positive beginning followed by a "let-down" period, then another comeback of positive reaction, followed in turn by a rather bad post-midterm slump. The final pull out of this slump brings feelings back to a positive plain equal to or higher than the beginning level and the semester ends on a strong social-emotional note.

Since the individual's feeling tone toward the group and toward meetings was converted to a rating, it was possible to conduct statistical analyses using the average rating assigned an individual's responses over the semester. Analysis of these data and relating them to other variables did not yield much in the way of significant results, but a few aspects are worthy of mention.

On comparisons made between those who, at the beginning of the course, expressed a preference for the small-group experience with those who preferred more traditional lecture-discussion classroom experience, there was a difference noted. PMR's to the group were more positive ($t = 1.628$, $p < .11$) for those who had said at the beginning they preferred the small-group situation.

PMR to meetings seemed correlated with amount of participation, for those low in quantity of interaction showed much less positive reactions to meetings than would be expected by chance and, to some extent, those high in interaction showed more positive reaction to the meetings than would be expected ($X^2 = 5.35$, $p \quad .08$). This general correlation is represented by a contingency coefficient of .30 which is significant beyond the .05 level of confidence ($C \quad .05$). And, while not statistically significant, it was found that those who expressed preference for the small-group approach to learning at the end of the course had had more positive reactions to meetings than those who indicated preference for traditional classroom learning ($t = 1.292$, $p < .20$).

Hence reactions to the group and to the small-group meetings seemed to be linked to the individual's feelings about the whole small-group learning experience.

Post-course questionnaire

A great deal of feedback concerning the course and the small-group learning experience was obtained from the questionnaire administered at the end of the course (see Appendix G). The findings can be organized best for presentation if the major items of student reaction and feedback are presented one at a time, including significant relationships of the item with other variables.

General reaction. In answer to the question: "What is your *general reaction* to your experience in this course?" the average response was a 3.02 on a 5-category scale ranging from very unfaverable to very favorable. This is the equivalent of a non-committal, "indifferent" response. Of course this average represents the balancing off of definite reactions both favorable and unfavorable which were received, in addition to those which clustered about the middle category.

Men were significantly more positive in their general reaction than women ($t = 2.233$, $p < .05$). Those who were low in achievement gain (post-test minus pre-test) showed less favorable general reaction than would be expected by chance and the higher achiever showed somewhat higher general reaction than would be expected ($X^2 = 6.00$, $p < .05$). General reaction also correlated positively with ratings given by the students on other variables such as course value ($X^2 = 8.690$, $p < .02$), satisfaction with the course experience ($X^2 = 17.780$, $p < .001$), increased interest in the subject matter of social psychology ($X^2 = 4.134$, $p < .05$), knowledge gained in the course compared with other similar courses ($X^2 = 6.890$, $p < .04$), and reaction to the experience in the group itself ($X^2 = 8.510$, $p < .02$). Those with a positive general reaction gave significantly higher ratings on all these variables than would be expected. So, while the average general reaction was rather non-committal, for those who had a positive reaction there was a close tie-in with other reactions and feelings toward the course and the total small-group learning experience.

Course value. The average response to the question: "How would you rate the *value* of the social psychology course (as you experienced it) to your overall college education?" was 3.2 on a 5-category scale from "of little or no value" to "very valuable." This was slightly above a rating of "average."

Here, again, the individual's estimate of the course's value is tied to a number of other feelings and reactions, including his general reaction already discussed. Some of the areas where the course value ratings tie in significantly with above chance ratings on the other variables are: satisfaction with the course experience ($X^2 = 16.460$, $p < .001$; $C = .48$), growth in interest in social psychology ($X^2 = 3.208$, $p < .08$), knowledge gained in the course (X^2 3.789, $p < .06$), and extent to which applications and implications of material were understood in this particular course ($X^2 = 3.651$, $p < .06$). It is logical that these sorts of findings cluster together but the levels of significance need to be observed. Another important area related to course value was the rating the student gave to his critical thinking as exercised in this particular course. While not statistically significant, there was a general correlation between the two variables: those high in course value ratings were found to rate their critical thinking high also ($X^2 = 1.728$, $p < .20$).

Satisfaction. A similar picture is found in the ratings on the statement: "Indicate your overall satisfaction with your experience in this course." The average rating was 3.2 on a 5-category scale from "very unsatisfactory" to "very satisfactory." This represents a rating slightly above "average." The picture is also similar in that there is a close tie-in of this variable with related reactions to the course--including those already mentioned, general reaction and course value. In general the most satisfied and less satisfied with the course tended above chance to give higher and lower ratings, respectively, on the following: increase of interest in social psychology ($X^2 = 9.539$, $p < .01$; $C = .39$) knowledge gained in the course compared with similar courses ($X^2 = 8.87$, $p < .02$; $C = .38$), critical thinking done in the course compared with similar courses ($X^2 = 5.13$, $p < .09$)--correlation not being high throughout, but those high in satisfaction tending much beyond chance to rate their critical thinking high, and extent to which applications and implications of subject matter were readily seen ($X^2 = 8.370$, $p < .01$; $C = .37$). Those who indicated at the end of the course that they preferred the small-group learning situation showed unusually high satisfaction and those who still preferred the traditional approach tended to show lower satisfaction ($X^2 = 19.107$, $p < .001$, $C = .51$).

Interest in social psychology. Students were also asked to answer the question, "As a result of this course what has happened to your interest in social psychology?" The average rating was 3.7 on a 5-category scale from "decreased markedly" to "increased markedly." This represents a reaction of "increased somewhat."

Men increased in their interest in the subject matter more than the women ($t = 1.803$, $p < .07$). When comparison was made with grade point averages, it was found that among those with the lower GPA's many more than expected indicated the higher increase in their interest in social psychology ($X^2 = 7.21$, $p < .03$). In addition to those factors reported earlier (general reaction to course experience, course value, satisfaction with the course) there are other variables which tie closely to increase in interest in the subject matter. Those indicating definite increase in their interest in social psychology gave higher ratings on their critical thinking ($X^2 = 8.480$, $p < .02$), their ability to see applications and implications of the material ($X^2 = 4.690$, $p < .10$), and their reaction to the experience in their small group ($X^2 = 5.60$, $p < .07$). As might be expected, those who indicated a preference for the small-group approach at the end of the course, showed much greater growth in interest and those preferring the lecture approach showed less interest growth ($X^2 = 11.358$, $p < .001$; $C = .42$). This last finding was corroborated with a t test of the difference between mean ratings on interest given by the groups preferring each approach ($t = 4.448$, $p < .001$).

Critical thinking done in the course. Ratings were given by students to the question, "How would you rate the critical thinking done on your part in this course compared with similar courses?" The mean rating was 2.8 on a 5-category scale ranging from "less in this course" to "greater in this course.". This average rating represents a rating a bit below "about the same."

One interesting finding on this question was that those who were working at jobs the least rated themselves above chance on their critical thinking in this course ($X^2 = 6.30$, $p < .05$). The positive relationship to ratings on course value and course satisfaction have already been discussed and it was also found that of those rating themselves high in their critical thinking many more than would be expected felt applications and implications of the material were readily seen in this course ($X^2 = 8.13$, $p < .02$; $C = .36$).

Applications and implications of material. Feedback was requested on how well the student felt he saw applications and implications of the material being studied. The question read: "How well have you seen applications and/or implications of the subject matter in this course as compared with other similar courses?" This is apparently an area where working in the small self-directed group was especially fruitful for the average rating given was slightly better than a 3.7 on a 5-category scale ranging from "worse in this course" to "better in this course." While there was no phrase describing the fourth point on the scale, this average rating would be between the top rating and the mid-point which read "about the same."

We have already cited the significant relationships between positive answers to this question and such variables as course value ratings, satisfaction ratings, increase in interest in social psychology, and critical thinking done in the course. One other finding is of interest. Students were asked whether or not their group met more than the required number of times--once each week. Among those who did meet more than the required times a large proportion indicated high ratings on seeing applications and implications in course material ($X^2 = 4.057$, $p < .15$).

Reaction to group experience. A final reaction sought on the post-course questionnaire dealt with feelings toward the experience of being a part of the small group. The question was asked: "What was your predominant reaction regarding the experience in your group?" The average answer was a rating of 3.5 on a scale from very negative to very positive. This indicates a point between "neutral" and "generally positive."

Reactions to the group experience were found to correlate significantly with the amount of participation in the group--those positive in reaction to their group also being high in "quantity of interaction" from the interaction process analyses ($X^2 = 5.90$, $p < .06$; $C = .31$). There was also correlation between reaction to the group experience and other variables such as ratings on course value ($X^2 = 4.04$, $p < .15$), and growth in interest in social psychology (cited earlier). Those highly positive in their reaction to the group experience tended strongly to prefer the small-group approach to learning over the traditional classroom approach ($X^2 = 12.877$, $p < .01$; $C = .44$).

If starting through the course again. An open-end question asked on the post-course questionnaire was: "If you were to start through the course again as you have just experienced it, what (if anything) would you do differently." While more subjective, these answers gave further insight to student reaction. Some of the responses are given below.

> Try to set more specific goals for the group at the very beginning.
>
> I'd try to keep up with the readings a little more and try to initiate or participate in more discussion.
>
> Nothing. I felt it was a good experience for us all.
>
> I would try to get our group to meet more often. I would also read more required reading.
>
> Come to question periods the professor attended and ask questions.
>
> Carry on a more comprehensive study of the book and outside readings.
>
> I would not depend on group discussion, but plan on "getting it" all on my own. Anything learned in the group would be a bonus.
>
> I would start participating sooner in the group discussion. Would have read more of the outside readings for reference. I would have tried to get the group to have better group goal than just to complete the course and for each person to have a singular goal of one grade--this hindered the group experience.
>
> I would read all through required readings outside of the text and more of the suggested readings. I would outline the chapters and/or studies and test myself periodically on the material. I would try to be a leader in the group and thus help direct the activities of the group as well as make sure all were involved in the group to its advantage.
>
> I would probably try to go to more of the discussion meetings with the professor to have him clear up or answer questions concerning the subject matter that I did not get in the small group meetings.
>
> I would make an effort to collect outside material for discussion group meetings.

The most commonly reported types of responses dealt with better study, greater participation in the group discussions, and more effort to see the professor on their own.

Suggestions for improvement. Another open question asked at the end of the course was: "What suggestions do you have for improvement in the course as you experienced it?" Some randomly selected responses are as follows.

> I think the presence of a group leader in the knowledge of the field would be helpful. For a while we were able to learn facts from the books. We were stymied many times on the application of these facts with no one to consult at that moment, but our own selves, thus sharing nothing but ignorance. Some sort of advisor within the group would be helpful.
>
> I feel that more tests should be given throughout the semester so that so much weight for the grade is not based on the final. Also, I feel that more of an essay type test should be given, not so much factual type questions--no room for opinion and letting the instructor know what you are thinking. Should also be more contact with the instructor. Maybe periodical required class meetings for discussion and evaluation.
>
> I feel that more intermediate goals are necessary. I had four other subjects to concentrate on this semester and these received more of my time because they were more demanding then. If more tests could be given during the year, it would solve this problem.
>
> This is basically and theoretically a good study plan, but the fact that we are not accustomed to it at all--(all our years of schooling)--it is so hard to adjust to it. Somehow the plan should be begun earlier in school. I would guess that a 2nd semester in such a situation would prove more successful for me. I would know how better to conduct myself.
>
> Personally, I think one-half lecture, one-half group meetings would be better because everything would be drawn together and organized. College students tend to "be lazy"--they prefer intellectualizing to hard-fact studyings. A little more control by the instructor would eliminate the haphazardness.
>
> Should have one class meeting with the professor a week so that general problems, which are probably faced by all the groups, can be discussed.
>
> I would suggest that students be informed prior to registration that the course would be conducted in this manner, as I feel that the small-group method, which relies heavily on personal initiative, will be really successful only if the groups are composed of people with a certain motivation toward this type of work.

The most frequently reported suggestions had to do with improving the organization and/or leadership in the groups, provision for closer or more frequent contact with the professor, and more tests or other forms of evaluation.

What liked most about course. Another question, "What did you like most about this kind of learning situation and experience?" resulted in such answers as these randomly selected ones.

> Freedom to study at our own pace.
>
> Independence and the feeling of accomplishment. Paper was exciting to do and most interesting piece of work I've done. Wish I had turned it into a project.
>
> That I need to think more about the subject matter. Was forced to integrate it into a system.
>
> It was more relaxed and the things we really got down to discussing we learned well.
>
> I suppose I liked it mostly because I was put in a group with a great bunch of psychology students and the desire to work together in the group motivated study.
>
> I found that I was applying the material without even realizing that I was learning it. It was a unique experience.
>
> I found that I put more effort into the reading. I didn't get behind or come unprepared, as is so easy to do in other classes. For here I would have been letting the whole group down, more than just myself and the prof. who never knows. It was a good group experience in getting along with, and working and cooperating with others. (Our Christmas party was a ball too!)
>
> I learned to participate in discussing more than I ever had. We had to learn to discipline ourselves. This is good, but I myself have not really learned to do this before. I did learn to discipline myself better. It was a new experience and took effort.
>
> It was relaxing and tended not to involve so much preparation. We were able to form our own ideas from the book and these ideas were then changed somewhat through discussion in the group. I enjoyed the group; it was different and an unusual experience. I am glad that I was able to experience a course in independent study.
>
> It gave me a chance to get to know 5 other people better than I ever would have gotten to know them if I had sat next to them in class all semester. I have found that I have also gained some self-confidence in my other classes as well. So often I have found that I don't understand something, and I am almost afraid to speak up and ask the teacher. But this was definitely not the case in this situation.

> Gave me a sense of independence and a sense of responsibility. Got to know other students better through independence and found that I also came to assume responsibility in other classes as well.
>
> Opportunity to discuss subjects relative to our own lives within the format of text material.
>
> The interaction with the group--getting to know them as individuals, sharing a common ground, learning to put up with their faults as well as their assets. The discussion, the learning by talking--agreeing, disagreeing, thinking about the things involved.
>
> Opportunity to work in an independent way with fellow students. As we interacted I could see the similarity and differences in our experiences of trying to understand certain concepts. As I used the book, I took more time than usual thinking about certain experiments and new social implications. Usually in the classroom I accept the teacher's word without question.
>
> Living off campus, for once I got to share ideas with other students in the study process. Discussions were great.

The most frequently repeated responses dealt with the opportunity for independent and individual study, group learning and group interaction, and the amount and freedom of discussion.

There is no reason to "editorialize" or comment further on these responses. They speak for themselves. They testify eloquently to the achieving of the major objectives in using this kind of self-directed small-group approach in college teaching/learning.

What liked least about course. A final open-end question asked on the questionnaire was "What did you like _least_ about this kind of learning situation and experience?" Some randomly selected responses follow.

> Lack of serious attitude by members of the group. Unprepared at discussions, caring only to pass. We did not have any real motivation other than this.
>
> The lack of any on-the-spot advice within the group bothers me, as well as dependence on only one test for evaluation.
>
> We did not know where we stood, how well we were learning the material or even if we were learning the material.
>
> The disorganization which exists in any such situation. Not to say that the groups weren't organized--they were, but the instructor wasn't there to help (on the spot). The more I think about it, I did learn and enjoy it, too, and perhaps because we are used to lectured classes we tend to favor them--they may not be the best.

> Not being able to get help about a question the moment the question comes up. I usually forget the question until it's too late.
>
> I think the thing I liked the least was the pressure imposed by knowing how I was supposed to be studying independently, and having to let it go and "catch-up" later. I needed the time for other things; I know I shouldn't, but many times I had to.
>
> Insecurity. Not feeling sure we were studying the right thing or coming to the right conclusions in our discussions.
>
> The fact that, at least in my case, students are not ideal, and tend to let assignments slide when faced with more immediate tasks, such as studying for tomorrow's physics test or next Monday's biology test. (I admit this was my case, though it seemed to hold for several fellow students,)
>
> Group situation is threatening, particularly when in small group lab. I dreaded it. Not enough structuring in discussions in first half a dozen sessions to glean much knowledge from them. Grading procedure also threatening. Often became caught up in discussion of how instructor thought we were doing rather than social psych.

Most frequently reported were responses regarding students' lack of preparation for and participation in the group discussions, lack of leadership and structure, and lack of tests and/or other forms of evaluation.

Again little comment is called for on these responses. They, too, speak for themselves and typify the kinds of misgivings, disappointments and frustrations experienced by students in a self-directed group type of situation. Other observations made of the students and gleaned from conferences with them as individuals and as groups simply support these very kinds of remarks written by them at the end of the course.

Findings on Other Desired Outcomes of the Course

As reported earlier, one of the apparent advantages of the self-directed group approach to college study has been that individuals in a self-directed group have been found to out-perform control groups and make measurable progress themselves on a number of other desirable outcomes of the educational experience-in addition to course achievement. Since pilot studies gave some leads, several factors were checked to see what progress was made by the experimental group. Measures on these factors were not available for any control subjects since all students enrolled were in the experimental group.

A pre-course and post-course check was made using the Brown-Holtzman Survey of Study Habits and Attitudes to see if the increased self-direction and responsibility had any measurable effect on such attitudes and habits. While there was a very slight increase in mean scores on the post-test over the pre-test, nothing at all significant was found.

The Watson-Glaser Critical Thinking Appraisal test was also used to get an objective measure of critical thinking. This test was also administered both at the beginning and at the end of the course to see if there might be any improvement in critical thinking from the self-direction and give-and-take of small group interaction. While only one semester is involved, there was a measurable difference found in the pre-and-post-test scores (correlated $t = 2.077$, $p < .05$). While this difference cannot be attributed only to this particular experience, it is logical to conclude that the stimulation and challenge of interaction in the small-group contributed something to growth in the sharpness and critical nature of the students' thinking. Some of the reactions and feedback gained from the students orally and in written form supports this conclusion. The ratings given by the students to the critical thinking done by them in this course were among the highest ratings given in comparing this course with other similar courses.

The interaction which the small-group discussions fostered may have been a positive outcome in itself, since it proved to be positively related to a number of other desirable factors. Favorable relationships were found between the quantity of interaction and the variety of interaction ($X^2 = 13.162$, $p < .001$; $C = .44$), the reactions of individuals to small-group meetings ($X^2 = 5.35$, $p < .08$; $C = .30$), and the reactions of individuals to the experience in their groups ($X^2 = 5.90$, $p < .06$; $C = .31$). Variety of interaction responses was favorably related to such factors as achievement score on the final exam ($X^2 = 5.264$, $p < .03$; $C = .30$), and, less significantly, ratings of knowledge gained in the course ($X^2 = 3.47$, $p < .20$; $C = .25$).

While the absence of the usual pressures, class meetings and deadlines apparently caused quality and quantity of study to suffer somewhat in the experimental course (ratings, respectively, of 2.6 and 2.5 on 5-category scales from "poorer in this course" to "better in this course"--meaning slightly below "about the same" as in similar courses), this is something easily improved by applying a few pressures. The more important thing is the favorable relationship found between study practices and other feelings or outcomes. Study quality showed favorable relationship to ratings on knowledge gained in the course ($X^2 = 6.37$, $p < .05$; $C = .33$), critical thinking done in the course ($X^2 = 4.91$, $p < .09$; $C = .29$), and the holding of more than the required minimum of small-group meetings ($X^2 = 15.420$, $p < .01$; $C = .47$). Correlation with these types of variables makes the kind of study done under these self-directed group conditions a highly desirable thing. Quantity of study was favorably related, though not for significantly, to increase in interest in social psychology ($X^2 = 2.109$, $p < .20$), for making applications and seeing implications of the study material ($X^2 = 5.26$, $p < .08$; $C = .30$), and to the holding of more than the required minimum of small-group meetings ($X^2 = 8.883$, $p < .07$; $C = .38$).

The feeling which the student had of the knowledge gained in the course may be considered a valuable outcome in itself. It was found to be related positively to a number of other factors already mentioned such as general reaction to the course, course value ratings, course satisfaction and quality of study. Those who preferred the small-group approach, significantly higher than chance reported higher ratings in knowledge gained ($X^2 = 6.239$, $p < .05$; $C = .32$). Although not statistically significant the ratings on knowledge gained showed a higher than chance relationship to ratings on critical thinking shown in the course ($X^2 = 2.634$, $p < .11$; $C = .21$).

In writing the assigned paper for the course the students apparently consulted library resources a bit more freely. In answer to the question "How many books would you estimate you have consulted in writing your paper for this course compared with other courses of this type?" the average response was a 3.5 on a scale from 1 ("less in this course") to 5 ("more in this course"). This average rating is somewhat above the middle "about the same" rating and a sizable number of students marked the top category.

The ratings reported earlier on critical thinking done in the course (3.7) and the extent to which applications and/or implications of the subject matter were seen in the course (3.7) also indicate that there were advantages to this approach. It is difficult with a sizable group to drive a rating up very far above an average category so this size average rating means that about a third of the students gave the top rating possible on outcomes such as these.

One additional item is of interest if the potential advantages of the small interactive learning group are recognized. There was some change in attitude toward this kind of learning approach over the semester. At the beginning of the course only 40% of the total group indicated an acceptance of the relatively independent form of study employing the self-directed small group. At the end of the course 50% indicated a preference for this small-group approach. From the feedback received from the students, it would seem that, with a few changes in the method employed, many of the unfavorable aspects of their experience could be eliminated and there would be even a much greater acceptance and preference for this form of study and learning. It appears that what may be needed (and this is already being worked into our experimentation and teaching approach at Hope College) is to find a workable and satisfying combination of the small self-directed group approach with the more conventional classroom technique such that the best advantages of each may be maximized and the drawbacks of each may be minimized. Some of the statements quoted earlier from the students give some valuable leads in finding this ideal combination.

Other Significant Findings

Some valuable findings appeared regarding the small-group approach to study and learning--especially having to do with the attitudes and preferences of the students for this kind of experience.

Attitudes toward small-group approach.

Those who had had experience with small-group discussion found this course more satisfying than those who did not have such experience ($t = 2.010$, $p < .05$) and also rated higher the critical thinking done in the course ($t = 1.372$, $p < .18$). Those with experience clearly expressed more preference for this approach than those without such experience, but this difference did not reach a level of statistical significance. Other areas where those with small-group experience responded more favorably (but not statistically significantly so) than those inexperienced were general reaction to the experience, estimate of course value, knowledge gained in the course and seeing of applications and implications of the material.

As has been mentioned, half of the total experimental group expressed a definite preference for this approach to study and learning at the end of the course. There were a number of other interesting observations when this group was compared with those who expressed preference for the more conventional classroom approach. Those expressing small-group preference rated their general reaction much higher ($X^2 = 18.087$, $p < .001$; $C = .50$), rated the value of the course much higher ($X^2 = 12.583$, $p < .01$; $C = .42$), rated much higher in satisfaction ($X^2 = 19.107$, $p < .001$; $C = .51$), showed much greater increase in their interest in social psychology ($X^2 = 11.358$, $p < .001$; $C = .42$), reported greater knowledge gained in the course ($X^2 = 6.239$, $p < .05$; $C = .32$), and rated higher their grasping of applications and implications of the subject matter ($t = 1.935$, $p < .07$). They also reported much more favorable reaction to their experience in the small group ($X^2 = 12.877$, $p < .01$; $C = .44$) and that they had held more than the required number of small-group meetings ($X^2 = 2.740$, $p < .10$). This seems like a powerful argument for the employing of small self-directed learning groups--especially for those who indicate a preference or even an acceptance of this kind of learning situation and experience.

The low GPA person.

One other miscellaneous finding appeared indicating an advantage of the small-group emphasis to the person with lower grade point average. In comparing those who have lower GPA's with those who are higher it was found that those with lower GPA reported better study both in quality ($X^2 = 5.52$, $p < .03$) and in quantity ($X^2 = 5.86$, $p < .06$) than would be expected by chance. They also reported consulting more books in preparing their papers ($X^2 = 5.14$, $p < .09$) and a greater increase in their interest in social psychology ($X^2 = 7.21$, $p < .03$) than would be expected. This indicates that the poorer student may profit considerably from this situation in which he has opportunity to interact with other students and proceed in more of an independent manner, with the advantages, of course, of a small group of which he is a significant member.

Group comparisons

Comparisons have been made of the group means on many variables studied. There is little reason to report these because they are not particularly meaningful in themselves. However, there are some observations which should be reported. There were three of the groups which ranked high on many of the variables. They seemed to be the truly "good groups" in the study. There were also two of the groups which seemed consistently to rank low. These were the "poor groups"--their means being near the bottom on most variables.

It is interesting that the "good groups" were not groups averaging high in grade point average. Yet in their performance and achievement in the course, on such factors as interaction in the small group, reactions and feelings toward their groups and their meetings, their attitudes and feelings toward the course, the quality and quantity of their study, the outside work and readings completed, and their ratings on knowledge gained, critical thinking and grasping of applications and implications of the material, they were high performers and producers. This seems to support the idea that the small self-directed approach to learning is feasible not only for gifted or capable students. It is of real value to the average or below average student as well.

The "poor" groups showed up the most poorly in their performance in and attitudes toward their groups. They also did not rate well in their outside work and the study put into the course. Their general reactions to the experience were rather low. The conclusion here seems to be that it is attitude toward the experience and the group and performance in the group, and not a matter of native ability or studiousness, which determines how well groups will come out in the self-directed learning situation.

Professor's "open house" and conferences

The "open house" held one afternoon each week at which students in the experimental class were encouraged to drop in either individually or in groups and stay as long as they wished to listen in on discussions or bring their own questions and problems, must be described as only partially successful. As might be predicted students were a little slow in picking up this kind of opportunity when it was something entirely new to their thinking and sometimes probably even hard to remember at the right time. However, for those who did stop in as individuals and as pairs and larger groups, it was a very significant time. It provided a time for personal contact between instructor and student and there could be no question but that the issues, problems and questions discussed led to new insights and better feelings. Anxieties concerning the course and special student concerns could be alleviated, problems they were running into on their papers or projects or in their groups were discussed and resolved, and much of the time there was friendly, relaxed give-and-take of a more personalized nature between the professor and student than can be achieved in most classrooms or other course oriented conferences.

The conferences were likewise worthwhile. These ran the usual gamut of concerns and about the same amount were conducted as are usually conducted in this kind of course. They typically dealt with more academic and course-oriented concerns although some of these, too, became discussions of more personal matters.

Those who availed themselves of these additional opportunities provided by the freedom from so many class meetings felt that the more personalized contacts with the professor were especially profitable and some of the groups particularly expressed the fact that they "felt so much better" after being able to talk over things that were of great concern to them or that had been big questions for them. Many students in the course did nothing to take advantage of these opportunities.

Addendum on Spring Semester Follow-through

Two developments in the experimental semester were so compelling they were actively pursued during the second semester--which did not involve the experimental students but involved a similar class being handled by a very similar technique. One dealt with the work on new categories for better identifying and analyzing the interaction in these groups and the second involved videotaping of most of the small-group meetings held in the observation room so that later, more intensive study could be made to determine those behaviors and events which especially enhanced or inhibited learning.

Development of new categories for interaction analysis

With the help of the two student assistants who were taking the records of interaction on the Bales recorders, a new set of categories were developed which seemed more appropriate to the learning-study type of small interactive group. (See Appendix H.) Not all twelve categories available on the Bales type recorder were necessary, but eleven of the twelve were eventually used. However, with some revision now going on, other more effective uses may be found for the twelve categories.

In general it was found useful to discuss the major types of remarks usually made and test out the use of such categories. When a general category was established a technique was devised (through the use of minus and plus signs) to indicate whether the participant was expressing or giving in regard to this category or whether he was seeking or receiving (e.g., "factual information" or "critical analysis"). Appendix H gives a detailed description of the method used and the categories but this must be considered as a tentative instrument still undergoing revision.

It may be pointed out that an initial validity check showed a very respectable percentage of agreement in the use of the categories when two observers kept a record on the same group in action. A tabulation has also been made of a number of groups whose interaction was analyzed using these categories. Inspection of these tabulations shows immediately that there is a much greater spread of responses throughout the various categories than was found in using the Bales categories. This would indicate that a considerably more penetrating and detailed analysis of the interaction is obtained--especially when it is considered that actually each category used may give two types of information when the minus and plus are used.

Problem categories might be worth noting. Category 4 ("critical analysis or evaluation") is not used too much because it is difficult to assess immediately whether a remark is critical analysis or evaluation or if it is simply opinion or information. Criteria for "critical" need to be established. Categories 9, 11 and 12 (reporting on tension, miscellaneous problems and unrecordable interaction) are not too heavily used. Perhaps a written note could take care of some of these observations and the number of categories could be reduced or these categories could be used for still more detailed identification and analysis of the type of interaction occurring.

The exploration in this area indicates that there is real potential in developing more meaningful categories for quite precise analysis of the type of interaction observable in the small learning-study group.

Observations from videotapes of live groups

The opportunity to videotape small groups in action during the second semester course was a somewhat unexpected "windfall" in this study and it has been one of the most exciting aspects of the whole investigation to go back over these tapes to look especially for instances in the interaction where learning seemed to be especially apparent and re-play the tape to see just what was said or just what form the interaction took that either aided learning or interfered with it at that point.

The following are some rather randomly selected instances where either positive or negative results appeared and they are presented in as nearly "raw form" as time and space will permit so that something of a "feel" for what was going on may be acquired.

Instances where learning was inhibited. The following events and conditions represent those observed in which the interaction and atmosphere in the group seemed to interfere with or prevent effective learning from occurring.

> At the end of this group's meeting the non-participant of the group gets up and leaves while others are filling out post-meeting reaction sheets and no one speaks or takes note of his leaving. There is no interaction at all between this member and other members of the group.
>
> Although coffee is available, no one in the group drinks any. It has been noted that coffee drinking seems to loosen discussion in other groups. Our concluding observation made on this session was that there was only general discussion.
>
> At one point two girls in this group fell to talking back and forth with each other rather than interacting with the whole group. This distracted noticeably from the accomplishment of the group.
>
> There is one member who is present in body and seems even to listen but never says a word. Other members are interested only with each other--apparently the pattern is set and this member is just left out of the interaction.
>
> This group at times seem to skirt issues and never really come to grips with the major point they mean to be talking about (e.g., "spiritual values" in this case). They talk in vague generalities and really labor over this because it becomes fruitless to talk about such an issue in generalities and platitudes when each individual has his own precise interpretation but does not or cannot communicate it.
>
> There is a subtle but very real hostility between two members of this group and a third. This is something that would be difficult to determine in an ordinary observation but upon replay of the tape, it clearly blocks free interaction and open communicating of ideas a number of times.

It is quite difficult to see too many ways in which learning is actually blocked or interfered with--even when re-viewing tapes of the interaction. It seems much easier to pick out those instances where there is some sort of breakthrough or new insight indicating that learning has been helped.

Instances where learning was enhanced. These are conditions or events in which particular discussion or ways of putting things or interacting led to a definite sign of some enhanced learning on the part of the immediate participant or someone else in the group.

> There are problems in this group over interpreting research reported in the textbook. Some play down the significance of a research report; others misinterpret. Yet from the discussion comes a real insight that each report must be taken for just what it is and no more, no less. It is concluded that terms usually are defined and the methodology reasonably sound, but it is still necessary to interpret results cautiously.
>
> One group member points out that the present experience in this course may be changing what he has felt to be a basic trait of human nature, viz., wanting to be directed and told what to do. Following were some fine insights regarding the real value of self-directed study and learning...a far better "selling job" than could ever have been accomplished in class.
>
> One member hands out materials to other members explaining: "These are not outlines; they are main points from notes on the chapter." This seemed helpful in giving the group focal points for discussion, Phrases indicating insights in this session were: "You have a good point there..." "that's a tremendous idea--because I can see where I do the same thing..." "That's interesting; I never thought of X as an example of this but I guess it really is!" There was excellent relating of material to campus experiences and a number of "confessions" and apparent insights into own behavior.
>
> Following a lengthy discussion in which everyone participates freely there is a tie-in back to a major statement in the text that at this point now has much more meaning and ties together the "ends" of the discussion very neatly and forcefully. Members of the group agree that this statement really says very well what they've been "reaching for."
>
> This group does well sharpening one another's thinking and not letting anyone get by with glib generalizations, requiring backing for expressed opinions, etc. They also tangle with some really difficult issues: e.g., "how do you, as a white person, demonstrate that you want to just be a friend and relate in the usual way to a Negro or an oriental student? You can't wear a badge. How can you do this without making it a special issue? How can you really be accepting without it being special or atypical? This is what we want and need to do but how do you do it?"

One member of this group makes the point that intermarrying and "mixing the races" (or not!) may have something to do with just maintaining an identity of a race and not be a matter of one race thinking it's superior to another. She said that she was not prejudiced but she was in favor of maintaining the identity or "purity" of her race. Of course others picked her up on this and it had to be clarified and discussed at length. However, it seemed new to many members: this sorting out the "identity" aspect of mixed marriage from the "sense of superiority" of one's race.

One girl in the group says "...let me ask you this: I feel this way about X and I wonder if others do, too." Another says that she has a father and fiance who "like to hunt" and she had been in Africa with them on hunting expeditions. She found she had to change many of her views and stereotypes regarding Africa and Africans. She shared this with others and it was an effective learning episode for all. Others gave some examples regarding Alaska, Hawaii, Kentucky hills, etc. Also lively discussion of how our group affiliations cause us to take on the prejudice of our group: fraternities, America vs. Russia, labor unions, etc. Finally a break-through type of comment: "Isn't this one of the big things we get out of college--that rather than accept what others tell us, we think more for ourselves?" Here there was complete agreement but the instructor could say this with much less enthusiastic reception, to be sure!

Good applications made in terms of social perception, sensitivity and dealing with other people at their level to make what we are communicating meaningful to them. Also discussion of how one keeps his own integrity while understanding more, accepting more, knowing more, etc. E.g., what about not presenting the whole truth or indulging in slight distortion for the sake of communication, in empathy. Especially a problem in spiritual or abstract matters...but sometimes even in more concrete matters that are complex and hard to grasp or communicate.

Good discussion today of status and prestige of groups and hierarchical arrangement, beginning with relevant focus on campus groups (fraternities, organizations, clubs, etc.) with extension to applying the same points and observations to larger societal groups. Considerable insight results because the parallels are clearly seen. Good relating of experiences and observations and noting the same principles and concepts in varied behavior, all helps the discussion.

Very good examples given of pushing beyond the text material in their discussion of what certain words in a language mean to us and whether our meaning of words is necessarily the correct meaning (e.g., "freedom"). Good insight and awareness of how meanings come from the context of a language; cultural, situational, conditioning, etc. Valid criticism of certain professors (especially in English and philosophy) who analyze and take apart a word so much and so thoroughly that they destroy what is there.

Session opened and continued most of the hour with very animated discussion of a protest group that had just walked out of Chapel this morning. (There is required attendance on this campus.) There was lengthy and thoughtful discussion of its appropriateness, effectiveness, timing, leadership, etc. A very good discussion relevant to their world and to social psychology. Much better than discussing the subject randomly or discussing artificially something from a textbook.

Good insights in group as to how after the first third of one's life he begins to reject, confirm, change the status he has had because of his family's social class. Also some penetrating analyses of our society and the different ways a person or his behavior may be viewed just because of his class affiliation. Good examples, such as Lucy and Pat Nugent, Rockefellers, hoboes, business executives and junior executives, college students, George Washington and Lincoln, Senator Percy, Kennedy's, religious leaders, Twiggy, Hell's Angels, etc., etc. Also this group made some excellent cross-disciplinary integrations comparing positions, views and contributions of political science, sociology and psychology.

One member relates an incident (and tells it very well!) of a visit he made to see a girl in Winchester, Virginia who invited him down for a few days. Here he was in a house like Mt. Vernon, surrounded by all this and finding himself uncomfortable and trying ("like an ass!") to overcompensate and be something he was not. The story was thoroughly enjoyed by all--especially since the teller was so entertaining in telling it--but the point of the differences in social class could never have been better illustrated and some significant points could never have been more eloquently made.

There is general discussion on groups and organizations for quite some time until one member attempts to get group to probe deeper by saying "What is the value of a group?" He keeps them probing beyond the obvious surface and immediate answers until some deeper comments emerge relating to such things as "growth," "you go away with something you didn't come with," "deep personal needs like status or need for activity group carried out," and "need for community--people you can identify with."

A good insight is shared that individuals may hide behind a stereotype of a group as well as be done an injustice by the group's stereotype. Good participation by all on this point. Some participated freely whom the instructor has had in class and even when discussion was encouraged they said nothing ever! The informal, peer atmosphere seemed to encourage real involvement.

> One member asks for clarification on a difficult concept used throughout the chapter (independent, intermediate and dependent variables in the study of group effectiveness) and this led to considerable discussion from which evolved good distinctions and clarification--on their own level and in their own language. This group was also particularly sharp at picking up contradictions in the text and among themselves. Most of the time they found ways of appropriately resolving the problem.
>
> One very interesting final observation. In one session there were several examples of role-reversal in the discussion (unintentional). Members stepped out of their usual stereotyped behavior pattern. One fellow who seems rebellious and reactionary turns out quite conservative on some issues; another member who has always appeared (and has a campus reputation for being) conservative switches to quite reactionary (and somewhat cynical) attitudes and positions. This leads to some new insights which only a relaxed, non-threatening group atmosphere could produce.

These are some of the many, many observations which videotaping of group sessions in action provides. It is expected that these tapes will continue to be re-viewed for further analysis of the behaviors and interactions which lead to new learning breakthroughs for group members. These observations are not only helpful for those who wish to use small groups as a learning approach but they are helpful as well to any person who is concerned that he produce the best possible conditions for learning in his classroom and in his class as a group.

Conclusions and Recommendations

Conclusions

The major conclusion of the present investigation is that it establishes and confirms further the self-directed small-group approach as a valid and highly productive approach to college learning. The impact which the self-directed learning has on the individual student, the motivation and stimulation which comes from the small-group experience, the active participation in the small-group discussions, the special benefits of the small-group processes, and the other desirable outcomes of the experience in addition to mere course content learning, have all contributed to the overall outcome. This approach has proven feasible and may prove exceedingly economical in terms of instructor time and required classroom facilities--depending on how self-directed study is conducted.

From the picture obtained of the patterns of interaction in the small groups and from the specific observations of group behavior, the small group has shown itself to be effective and productive in its contribution to student growth and to learning.

Of particular value have been the direct observations made of the groups in action with the resulting identification of behaviors and patterns of interaction contributing to or detracting from learning. The videotapes of group sessions obtained in the second semester follow-through have provided new insights into the dynamics of the situation which may enhance or hinder learning breakthroughs. These observations made of the learning situation are useful both to further study of the small-group approach and to the conventional classroom as well.

The other desirable outcomes of the experience such as critical thinking, grasping of applications and implications of the material, increased interest in the subject field, study and reading done for the course, and general satisfaction with the course experience, have all indicated that the overall benefits of this kind of learning experience extend far beyond the content learning achieved.

Recommendations

Any list of recommendations springing from this study must be led by the strong recommendation that more study be given to the self-directed student group approach to college learning. The exploratory nature of this investigation has precluded being very precise and complete in conclusions drawn or even in many of the findings, themselves. In future studies specific hypotheses should be delineated--perhaps based on these and other exploratory findings so that the design of the study and the results will be more precise and meaningful.

If possible, future studies should include a control group which can be run at the same time and provide measures on all variables to parallel those of the experimental group.

A recommendation for future experimentation with the small self-directed group is that a bit more structure seems desirable. What seems to be needed is a more ideal combination of the advantages of the structure of the more conventional classroom instruction and the advantages of the freedom and independence and self-directedness of this approach.

Some more specific recommendations related to the self-directed group experimentation are also in order. It may be better to restrict post-meeting reaction reports to a total of 4 or 5 throughout the whole semester rather than having them every week, providing just as valuable information and not burdening the student with too many reports to make. The instructor might well meet with representatives of the small groups periodically--perhaps each week--to provide a better two-way flow of information and feelings between teacher and students. The instructor might provide guide questions or issues (or require group leaders to provide them) to aid in livening the discussion in the small-group meetings. More incentives of various sorts might be provided for the students to attend faithfully and participate actively in the small group sessions. (The author resists resorting to this kind of subterfuge, but it may be necessary or beneficial.) It might be possible to find a way of making the professor available during the group sessions or immediately following, while not making him so accessible that the group will turn to him before pushing through difficult discussions and issues on their own. Perhaps a recorder or other group member could be made responsible to carry unresolved questions to the professor and report back to the group.

All these suggestions are made in an effort to find better ways to make the learner more responsible for his own learning and yet provide him with enough structure and support so that he will not be overwhelmed by the prospect and will not permit other more pressing demands to supplant this learning experience.

Supplementary and Appendix Materials

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Appendix A

SOCIAL PSYCHOLOGY COURSE SYLLABUS

Course Objectives

The objectives for students in the social psychology course are:

1. knowledge of concepts, principles and methods of social psychology (e.g., such topics as social aspects of motivation, emotion and perception; attitudes and prejudice; human communication; enculturation and socialization of the individual; role behavior; dynamics of group process and group leadership; the individual's relationship to his group; etc.; also how these are systematically studied by the social psychologist)

2. awareness of and appreciation of (a) the reciprocal nature of the interaction between the individual and his social environment and (b) the influence of this interaction in shaping social behavior

3. understanding of the role of this human interaction in group formation and group function

4. skill in interpersonal relationships and in group membership and group leadership roles.

Topical Outline

(following Krech, Crutchfield & Ballachey's Individual in Society)

I. Introduction: the field of social psychology

Required reading:	TEXT, Ch. 1: "The Domain of Social Psychology" Lindzey, G. (ed.) HANDBOOK OF SOCIAL PSYCHOLOGY (Vol. 1), pp. 4-5, "Defining Social Psychology"
Supplementary reading:	Lindzey, G. (ed.) HANDBOOK OF SOCIAL PSYCHOLOGY (Vol. 1), Ch. 1: "The Historical Background of Modern Social Psychology" Doob, L. SOCIAL PSYCHOLOGY, Ch. 6: "The Methods of Research"

II. Basic psychological factors in human interaction

A. Cognitive processes and cognitive systems

Required reading:	TEXT, Ch. 2: "Cognition"
Supplementary reading:	Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, any of the articles in Ch. 2: "Perception, Memory, and Motivation"

B. Motivation: human needs, wants, and goals

Required reading:	TEXT, Ch. 3: "Motivation"
Supplementary reading:	Newcomb, Turner and Converse. SOCIAL PSYCHOLOGY, Ch. 2: "The Organization of Psychological Activities"

II. Basic psychological factors in human interaction (cont'd)

C. Patterns of interpersonal behavior

Required reading: TEXT, Ch. 4: "Interpersonal Response Traits"

Supplementary reading: Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, Ch. 3: "Perception of Persons," article by Tagiuri, Bruner and Blake ("On the Relation between Feelings and Perception of Feelings among Members of Small Groups")

III. Social attitudes

A. The nature and measurement of attitudes

Required reading: TEXT, Ch. 5: "The Nature and Measurement of Attitudes"

Supplementary reading: Newcomb, Turner and Converse. SOCIAL PSYCHOLOGY, Ch. 3: "The Nature of Attitudes" and Appendix A: "The Measurement of Attitudes"

B. The formation of attitudes

Required reading: TEXT, Ch. 6: "The Formation of Attitudes"

Supplementary reading: Newcomb, Turner and Converse. SOCIAL PSYCHOLOGY, pp. 40-45: "attitudes"
Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, Ch. 13: "Intergroup Tension, Prejudice," article by Frenkel-Brunswik, Levinson and Sanford ("The Antidemocratic Personality")

C. The changing of attitudes

Required reading: TEXT, Ch. 7: "The Changing of Attitudes"

Supplementary reading: Newcomb, Turner and Converse. SOCIAL PSYCHOLOGY, Ch. 4: "Attitude Change"
Maccoby, Newcomb and Hartley, Ch. 13: "Intergroup Tension, Prejudice," article by Deutsch and Collins ("The Effect of Public Policy in Housing Projects Upon Interracial Attitudes")

IV. The social and cultural setting of human behavior

A. Language and communication

Required reading: TEXT, Ch. 8: "Language and Communication"
Maccoby, Newcomb and Hartley. READING IN SOCIAL PSYCHOLOGY, Ch. 1: "Language and Stereotypes," article by Whorf ("Science and Linguistics") and article by Verplanck ("The Control of the Content of Conversation: Reinforcement of Statements of Opinion")

Supplementary reading: Maccoby, Newcomb and Hartley. READING IN SOCIAL PSYCHOLOGY, any of the other articles in Ch. 1: "Language and Stereotypes"

IV. The social and cultural setting of human behavior (cont'd)

B. Society and social class

Required reading: TEXT, Ch. 9: "Society
Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, Ch. 9: "Social Stratification," articles by Davis, et al ("The Class System of the White Caste") and by Converse ("The Shifting Role of Class in Political Attitudes and Behavior")

Supplementary reading: Maccoby, Newcomb and Hartley. READING IN SOCIAL PSYCHOLOGY, Ch. 9: "Social Stratification," article by Bronfenbrenner ("Socialization and Social Class through Time and Space")

C. Culture and its impact on human behavior

Required reading: TEXT, Ch. 10: "Culture"
Lindzey, G. (ed.) HANDBOOK OF SOCIAL PSYCHOLOGY (Vol. II), pp. 921-925, "Culture and Behavior" and pp. 1007-1016.
Maccoby, Newcomb and Hartley. READING IN SOCIAL PSYCHOLOGY, Ch. 8: "The Socialization of the Child," article by Mead ("Adolescence in Primitive and Modern Society")

V. Groups, organizations, and the individual

A. Groups and organizations: their structure and functioning

Required reading: TEXT, Ch. 11: "Groups and Organizations"

Supplementary reading: Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, Ch. 12: "Group Structure and Process"

B. Leadership and Social Change

Required reading: TEXT, Ch. 12: "Leadership and Group Change"
Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, Ch. 11: "Leadership," articles by Hollander and Webb ("Leadership, Followership, and Friendship: An Analysis of Peer Nominations") and by Merei ("Group Leadership and Institutionalization")

Supplementary reading: Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, any of the other articles in Ch. 11: "Leadership" and Ch. 5: "Interpersonal Influence," article by Coch and French ("Overcoming Resistance to Change")

C. The effective group: factors influencing group effectiveness

Required reading: TEXT, Ch. 13: "The Effective Group"

V. Groups, organizations, and the individual (cont'd)

D. The individual in the group

Required reading:

TEXT, Ch. 14: "The Individual in the Group"

Doob, L. SOCIAL PSYCHOLOGY, Ch. 14: "Vogues" (Fads and Rumors)

Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, Ch. 10: "Role and Role Conflict," article by Gross, McEachern and Mason ("Role Conflict and its Resolution"); Ch. 5: "Interpersonal Influences," articles by Asch ("Effects of Group Pressure upon the Modification and Distortion of Judgments") and by Sherif ("Group Influences upon the Formation of Norms and Attitudes")

Supplementary reading on behavior under situational influence (strongly recommended):

Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY, Ch. 7: "Behavior Under Situational Stress," articles by Cantril ("The Invasion from Mars"), and by Schein ("The Chinese Indoctrination Program for Prisoners of War: A Study of Attempted 'Brainwashing'")

Lindzey, G. (ed.). HANDBOOK OF SOCIAL PSYCHOLOGY (Vol. II). pp. 840-847, on crowds and mobs

Library Reserve List

Allport, Gordon. THE NATURE OF PREJUDICE - 2 copies
Doob, Leonard. SOCIAL PSYCHOLOGY
Lindzey, Gardner (ed.). HANDBOOK OF SOCIAL PSYCHOLOGY (Vols. I and II) - 2 copies
Maccoby, Newcomb and Hartley. READINGS IN SOCIAL PSYCHOLOGY (3rd ed.) - 5 copies
Newcomb, Turner and Converse. SOCIAL PSYCHOLOGY - 2 copies

(Most social psychology books are in the 301.15 section of the stacks but other books in sociology and psychology may also be helpful. There is a "social psychology" section in the card catalog for quick reference.)

Appendix B

SOCIAL PSYCHOLOGY

General Instruction Sheet

In the social psychology course this semester we are conducting an experiment in college teaching and college learning. To a certain extent, it is an experiment in independent study, because you will have limited contact with the instructor. However, a rather definite structure has been established and it is important that whatever the students in the course do throughout the semester be within this general framework.

A considerable amount of research has now accumulated to indicate that college students learn much and learn well in small self-directed groups, operating quite independent of formal instruction. At least in certain types of courses (much of the experimentation has been done in psychology courses) the students in the self-directed group usually learn a little better than control groups going through the course in the conventional classroom manner. However, there are some very important questions about this approach to higher education that have not yet been answered adequately. Just what happens in a small group of college students studying independently that enhances learning and just what takes place that inhibits learning, we do not yet know. You are involved in an experimental study to find the answers to some very important questions along these lines.

We have taken great care to structure this course so that it is, first of all, entirely respectable academically. We can assure you that you will learn as much social psychology (or more!) as you would learn if you met with your instructor three days a week in class. You will be required to complete certain requirements and take a final comprehensive exam just as you would do in the regular course. What is different about this course is that you are going to have a much more active role in your own learning throughout the semester and your total learning in this course will most likely be greater both in quality and in quantity. You will gain the benefits of independent study (although you will not work entirely independently); you will experience the excitement of planning and carrying out your own learning experience; and you will benefit from being a part of a small student group engaged in a cooperative effort to really grow personally as well as learn intellectually in this very important area of the study of human interaction and human behavior (social psychology).

The role of the student. As we have indicated, your role as student in this course will be a relatively independent one. Within the framework or structure provided, you will proceed on your own to study and learn with the other members of your small group. This means that you will not only control and be responsible for your own learning, but you will also have the responsibility of being (or becoming!) an effective group member. These are your two most significant roles: relatively independent college learner and productive member of a small study group.

The role of the professor. As the material being handed out to you indicates, a great deal of planning has gone into this course to be sure it is structured in such a way as to be most productive of the learning we are seeking. My role, as professor in the course, will be to continue careful supervision of the entire semester's work. Approximately every two weeks we will all meet together in the classroom. At this time we can discuss anything you wish regarding the course material or the experimental approach to it which we are using. The dates of these meetings in this classroom are on the course calender. In addition, every Tuesday afternoon from 1:30 to 3:00 I shall be available in a sort of "open house" in Shields. At this time, you are encouraged to come in to discuss any specific questions which you do not wish to discuss or questions which would be inappropriate to discuss when the larger class group meets. This will be an open house in the sense that any and all students are free to come and go as they wish; that is, they may stay and listen to the questions of other students and the answers and discussion which follows. In addition to these class meetings and open house sessions, I shall be available "other times by appointment, in my office." The aim of this approach is to free both student and professor from so much time spent in class so that it may be invested in small-group discussion and contact with the professor that is either more personal or oriented specifically to students' questions. Of course part of my role will be to take the responsibility for the final evaluation and grading in the course, although this will include evaluation other than my own, as discussed below.

The role of the small group. The small group to which you are assigned (randomly) is to hold a minimum of one meeting each week that school is in session. You will be meeting on your own and will determine among yourselves just how and at what pace you will work through the material in the syllabus. There is a designated place for some of these group meetings but, aside from that, you may meet where and when you wish. When you do meet in the specified place (Shields 11) please be sure to sit according to the arrangement provided by the name tags. The purpose of the small group discussions is to discuss among yourselves whatever you want to,relative to the course material and other matters pertaining to the course. The small group will provide opportunity to clarify the reading material among yourselves, to interpret its meaning, to make practical applications and develop implications which it has for everyday life. A manual has been prepared which may prove helpful to you and your group in making these meetings productive. It would be advisable to read the manual carefully several times throughout the semester as your group work progresses.

Requirements of the course. The actual requirements of this course are few but they are extremely important. (1) You will have the responsibility of studying relatively independently throughout the semester. (2) You are required to take the pre-tests given at the beginning of the course and the post-tests given at the end (during the last week of classes and the final exam time). (3) Attendance at weekly meetings of your small group is considered a requirement because your group's effectiveness and success is dependent upon good attendance. Following each small-group meeting you are to fill out a "Small Group Meeting Report" and see that it is left in the box provided at Shields *by the end of that week*. (4) There will be a written term paper or special project due on May 8, 1967. A formal proposal clearly indicating what you plan to do for this requirement is to be submitted by Wednesday, February 22, 1967. These are to be turned in at Shields. If you choose to write a paper, it is to be properly documented with footnotes and a bibliography in accepted form. If you choose to do some sort of special project, you may wish to discuss this with me before finalizing your proposal and proceeding with the experiment. You are required to do only one of these: either the term paper or the special project. This assignment may be done on any topic or problem of your choice as long as it is related to the general field of social psychology. *A penalty in grade will be levied for each day this assignment is late*.

__Final__ __grade__ __in__ __the__ __course.__ Your final grade in the course will be based on four forms of evaluation. Forty-five per cent (45%) of the grade will be determined by your performance on a final comprehensive exam covering the required readings. Fifteen per cent (15%) of the grade will depend upon your term paper or special project. Twenty per cent (20%) of the grade will depend upon evaluation made of you by the other members of your small group--based on the growth and the contribution you have shown in the small group. Twenty per cent (20%) of the final grade in this course will be determined by a self-evaluation, in which you rate yourself in terms of your growth and your performance throughout the semester in this course. The last two items mean that you will be asked to rate yourself and the other members of your small group at the end of the semester in terms of the objectives of the course and in terms of growth and performance throughout the semester. This may seem a bit formidable now but by the end of the semester, you will be in a position to do this without too much trouble. The major objective of this whole approach to college learning is to engender self-growth and self-directed learning; consequently, you and the fellow group members with whom you work throughout the semester are in the best position to evaluate certain aspects of your performance and progress.

Do not conclude that, with this approach, I am loafing or you are not getting your money's worth. I assure you that both the work I put into the course and the true learning you get from the course are greater!

If you have additional questions regarding the course or experimental approach we are employing, I shall be available as indicated above to discuss these matters in as much detail as you may wish.

Dr. Leslie Beach
Department of Psychology
Shields 3

Appendix C

SOCIAL PSYCHOLOGY

Small-Group Meeting Report

Name ________________________________ Group ______________

Date of this meeting ____________________ Place of meeting ________

Length of meeting ______________________ Number present _________

Broadly speaking, what was discussed at the group meeting? ____________

____

What are your feelings toward the group at this point? _______________

____

How do you feel about this meeting of the group? ___________________

____

Is there anything specifically you would like to see happen the next time your group meets? ____

____

Appendix D

MANUAL FOR SELF-DIRECTED STUDY GROUPS

There is more to an effective discussion group than just getting a number of bodies together for a bull session and then seeing what happens. Effective groups are made up of effective group members and every member of a small group has a responsibility and an important role in achieving the goals of the group.

In order for these self-directed study groups to be most productive and beneficial in terms of true growth and learning, a few suggestions are made here which may help individuals and the group function to the best advantage of all.

An atmosphere conducive to growth. The general atmosphere would be relaxed and informal, yet suitable for serious intellectual work. Take time at the beginning to become well acquainted and develop a friendly climate in your group. Be sure everyone understands both the purposes and the procedures of your group meetings. This is a cooperative venture within your group and you can all be a source of support and benefit to each other.

Participate actively in the discussion. Of course the object of the group discussion is not simply to re-hash the material in the readings but, nonetheless, it is appropriate to discuss fundamental points, issues and concerns related to the readings. Many students feel that reading and listening is about all there is to education and that thinking and verbalization of one's learning is not necessary. Research shows quite the opposite to be true. Study shows that students do not always understand facts and principles of psychology, having read about such concepts in a textbook, even when they feel they comprehend them. Expressing oneself regarding a concept or an issue and exchanging interpretations, discussing applications and developing implications of it with others, not only sharpens the point for everyone but insures less misunderstanding and less "pseudo-learning", that is, supposed learning which actually has not progressed beyond the memorize-store-regurgitate cycle. It is this further active handling of the material which enables the learner to assimilate it and make it his very own.

Prepare for group sessions. Preparation prior to group meetings is essential--both to your learning and to your relations with your fellow group members. You do a disservice to yourself and to your group any time you come to the discussion not well prepared. Your learning is incomparably greater with good preparation. Even though it may not always seem like it, this is true. Your verbalizing about the concepts and actively discussing their meanings, implications and applications, increases your learning, sharpens it and fixes it more permanently in your mind. Your group, too, will reap its greatest benefit only as participants are prepared. Don't let your group down! All group members must share the responsibility for preparedness, punctuality and participation (the three potent P's).

Make your discussion pertinent and meaningful. This brings us to the importance of taking an active part in your group's discussion. We don't want soliloquies by one or two persons in the group, but we don't want "silent Sams," either. It might be a good plan to bring at least two or three questions on the reading material to each discussion session. These could be questions to which you really want an answer (e.g., clarification of material) or questions you feel the group should discuss further to get the most meaning out of a concept, or questions you think will constructively broaden or deepen the thinking of your group's members. If you have a chairman, he may appoint persons each time to bring in suitable discussion questions at the next session. Be sure, though, that all individual questions get consideration.

Make a special effort to relate your readings and study in social psychology to today's real human problems, issues and concerns--be they here on our campus, in this or other cities, other regions, or other countries.

Listen carefully to others. It is not only courteous, it is smart to listen carefully to others. One learns much from listening if he listens well. Be sure you understand the other person's point before you make any comment or give your reaction on that point. If your group has problems along this line, require each person to repeat what the previous speaker has just said to that person's satisfaction, before any comment or reaction is given to what was previously said. Listen thoughtfully; and relate what you have to say to what has gone before. Make your point relevent to what others have said.

Tolerance and openmindedness toward the views of other is important in a small group discussion. Be flexible and patient...as you would have other be toward you. Don't jump to a conclusion before a topic has been explored and all the facts are in. Often heard in the imaginative, creative group will be questions like "what other aspects or approaches are there to this question?" "Does anyone want to add anything to what has been said?" "Does anyone disagree?" "How else might we look at this?" "Is there another meaning here?" "Does this make sense, or have I left out something?"

You may want a discussion leader. If your group decides it wants a chairman, one person can be chosen for the job or it can be passed around. A chairman, however, should be someone well suited by temperament, experience, and inclination to take the general responsibility of helping the group function effectively. He helps the group stay on the topic; he draws on available knowledge and resources which members of the group have to offer; he sees that everyone has opportunity to make his best contribution to the group and actually does so; he sees that all contributions are understood and given full consideration; he summarizes periodically; and, in general, he keeps the group working toward the attainment of its objectives. One very important role of a good chairman is to help the group recognize and consider problems of its own operation. For example, he helps the group explore disagreements that come up in order to find the real nature of the disagreement, while not allowing the disagreement to divert the group unduly.

These leadership functions may be shared, of course.

Deal imaginatively with group problems which may arise. There are personality differences among the members of any human group. Likewise, different individuals will bring to this group experience varying backgrounds in knowledge, experience and discussion skills. Some, by temperament or habit, will be aggressive, verbal and active participants while others will be shy, not too secure and hesitant to participate in discussion. Each individual has the task of not only studying, learning, and meeting course requirements but also of becoming an effective member of a small discussion group. One of the most significant things to be learned in this course may be attitudes and skills that will make you a better listener or participant in a small-group discussion. Do all you can to make your group function effectively. Differences, even clashes, among individuals need not keep you from becoming an effective, productive, learning group. Indeed, conflict is often essential for growth and advance.

Don't feel you have to fill every minute with talk. Silences can be very productive intellectually. Rare is the person who doesn't do his best thinking when he's not talking.

Speak slowly and clearly so that everyone can hear and understand you. Say what you have to say in as few words as possible; don't mumble or ramble on after your point is made.

Motivation is probably the most important single contributing factor to whether one learns or not. "Students want to know" it has been said. However, curiosity--wanting to know--will not prove sufficient motivation to sustain you through arduous, disciplined, persistent study. You'll need more motivation than this so seek ways to develop it. It has to come from within yourself. No one can give it to you.

It may be a good idea at the close of each meeting to agree what will be discussed in the next session. In fact, as a group you may wish to develop a plan of strategy for the whole semester's work so all will know what will be discussed when, and to insure that the material is covered to your satisfaction.

Books in the library on group dynamics and group discussion may be helpful if other problems seem to bog down you or your group.

A final word. Full discussion of a major topic usually will include: (a) the facts, the data or the basic ideas and concepts involved and how these were secured or developed; (b) organization and integration of the various facts and concepts into generalizations or principles; (c) the implications of (a) and (b) and their relation to other ideas and principles; (d) illustrations and applications from real life, especially from your own experience and observation.

KEEP THIS MANUAL HANDY!!

(You may want to refer to it throughout the semester.)

Appendix E

HOPE COLLEGE

Department of Psychology

SOCIAL PSYCHOLOGY PRE-COURSE QUESTIONNAIRE

Instructions: Your cooperation in providing all the information requested on this form will be greatly appreciated by your instructor. This information will be considered confidential and will be used for research purposes only. It will NOT affect your grade in this course.

1. Name ______________________________ 2. Age _____ 3. Sex ___M ____F
Last First Middle

4. Marital status:
_____single
_____married
_____family
_____no. of children
_____other

5. Living:
_____on campus
_____ off campus

6. Working:
_____hrs. per week
_____ not working

7. Classification
_____Frosh.
_____Soph.
_____Junior
_____Senior
_____Special

8. Major or field of interest
_____Psychology
_____Sociology
_____Pre-Nursing
_____Pre-Social Work
_____Pre-Ministerial
_____Economics/Business
_____Teaching: Level __________
Major field __________
_____Other (specify) ______________

9. What is your cumulative grade point average? ______________

If you don't know, estimate it as closely as you can. __________

10. Courses completed in psychology (list by title of course)

1.

2.

3.

4.

5.

11. How would you define psychology?

12. How would you define social psychology?

13. What topics would you expect to have discussed in a course in social psychology?

14. What experience have you had in leadership positions?

15. Have you had any experience where small-group discussion was the major form of instruction or learning? ________yes ________no

If so, describe briefly the situation:

16. Other things being equal, which of the following two learning situations would you prefer for your study of this course in social psychology? (check one)

______ study as a total class under the conventional lecture-discussion method of instruction.

______ relatively independent study meeting once a week in a small group (5 or 6 students) to discuss the course and related readings and meeting occasionally with the instructor for class discussion or consideration of specific questions.

Appendix F

Group _____ Date _______

SMALL-GROUP INTERACTION ANALYSIS SHEET

Group Members

Bales categories	1	2	3	4	5	6
1. Shows solidarity						
2. Shows tension rel.						
3. Agrees						
4. Gives Suggestion						
5. Gives Opinion						
6. Gives Orientation						
7. Asks for Orientation						
8. Asks for Opinion						
9. Asks for Suggestion						
10. Disagrees						
11. Shows Tension						
12. Shows Antagonism						

Appendix G

SOCIAL PSYCHOLOGY POST-COURSE QUESTIONNAIRE

Your cooperation in providing all the information requested on this form will be greatly appreciated by your instructor. This information will be considered confidential and will be used for research purposes only. It will NOT affect your grade in this course.

1. Name ______________________________

2. What is your general reaction to your experience in this course? (check appropriate point on scale.)

Very favorable	Favorable	Indifferent	Somewhat unfavorable	Very unfavorable

3. How would you rate the value of the socialpsychology course (as you experienced it) to your overall college education?

Very Valuable	Valuable	Average	Slightly Valuable	Of little or no value

4. Indicate your overall satisfaction with your experience in this course. (Check appropriate point on scale.)

Very Satisfactory	Satisfactory	Average	Somewhat Unsatisfactory	Very Unsatisfactory

5. How many of the non-required suggested readings did you read? ______________

6. Approximately what percentage of the "required readings" outside the text did you read? ___________

7. How would you rate the studying you did for this course compared with the studying you have done for other similar courses:

a. Quality of your studying

Better in this course	About the same	Poorer in this course

b. Quantity of your studying

More in this course	About the same	Less in This course

8. In addition to the "required readings" and books used for your written paper, about how many books and magazines did you consult in connection with this course compared with what you usually do for this kind of course?

Read more for this course	About the same	Read less for this course

9. How many books would your estimate you have consulted in writing your paper for this course compared with other courses of this type?

More in this course	About the same	Less in this course

10. As a result of this course what has happened to your interest in social psychology?

Increased markedly	Increased somewhat	Has not been affected	Decreased somewhat	Decreased markedly

11. How would you rate the knowledge gained in this course compared with similar courses?

Greater in this course	About the same	Less in this course

12. How would you rate the critical thinking done on your part in this course compared with similar courses?

More in this course	About the same	Less in this course

13. How well have you seen applications and/or implications of the subject matter in this course as compared with other similar courses?

Better in this course	About the same	Worse in this course

14. If you were to start through the course again as you have just experienced it, what (if anything) would you do differently?

15. If you had it to do over and could choose which type of learning experience you could have for this course, which would you choose? (check one)

______ Lecture-discussion classroom situation

______ Small interactive discussion group with occasional contact with instructor

16. What was your predominant reaction regarding the experience in your group?

Very positive	Generally positive	Neutral	Generally negative	Very negative

17. Did your group meet more times than the suggested minimum (once a week)? ______
If so, how often or how many extra times did you meet? ______

18. What suggestions do you have for improvement in the course as you experienced it?

19. What did you like most about this kind of learning situation and experience?

20. What did you like least about this kind of learning situation and experience?

IN REPORTING THE RESULTS OF THIS RESEARCH, MAY WE QUOTE YOU, PROVIDING PROPER PRECAUTIONS ARE TAKEN NOT TO REVEAL YOUR IDENTITY? ________YES ________NO

Name ______________________

EVALUATION OF GROUP MEMBERS AND SELF

As was pointed out at the beginning of the semester, the major objective of this approach to college learning is to engender greater self-growth and self-directed learning. You and your fellow group members with whom you have worked throughout the semester are in the best position to evaluate certain aspects of each group member's performance and progress.

To aid you in evaluating yourself and your fellow group-members the course objectives as stated at the beginning of the semester are as follows:

1. knowledge of concepts, principles and methods of social psychology (e.g., such topics as social aspects of motivation, emotion and perception; attitudes and prejudice; human communication; enculturation and socialization of the individual; role behavior; dynamics of group process and group leadership; the individual's relationship to his group; etc.; also how these systematically studied by the social psychologist)
2. awareness of and appreciation of (a) the reciprocal nature of the interaction between the individual and his social environment and (b) the influence of this interaction in shaping social behavior
3. understanding of the role of this human interaction in group formation and group functioning
4. skill in interpersonal relationships and in group membership and group leadership roles.

With these objectives in mind, along with the cited major objective of this approach to college learning, list the names of the members of your group and grade each one in terms of his growth and contribution in the group throughout the semester--according to your best judgment. (Use A, B, C, D, or F, including a plus or minus if appropriate.)

In a similar manner evaluate your own growth and performance in the group throughout the semester and grade yourself accordingly.

Appendix H

INTERACTION ANALYSIS CATEGORIES FOR A LEARNING GROUP DISCUSSION

The method employed for making the analysis was to employ these categories with a Bales interaction analysis recorder. Participants were numbered and a + or - following the participant's number would indicate whether he was "giving" or "seeking" in his behavior under a particular category.

1. PROCEDURAL SUGGESTION (gives, seeks)

Most often used at the beginning of the meeting to get order and begin discussion. May be asking "Does anyone have a question?" or "Where shall we start?" or "What shall we do today?" Also used during the meeting to keep up discussion or move to a new topic. Sometimes this may come at a moment of temporary tension (when group is silent for a short time or in a heated disagreement) and may also occasion an entry under "tension release." May take the form of a rhetorical question.

2. INFORMATION (factual, observation) (gives, seeks)

Participant gives (or seeks) information from a definite source such as textbook, instructor or previous group discussion. Restricted to that which is factual and/or observable; if material is only supposedly factual or if there is any interpretation, categories #3 and #4 should be used.

3. OPINION (personal judgment, evaluation, interpretation) (gives, seeks)

Remark (or question) involves meaning and ramifications of material under discussion. May reflect personal preferences and judgments on issue or topic. Used in combination with categories #2 and #8, also.

4. CRITICAL ANALYSIS OR EVALUATION (gives, seeks)

Shows evidence of (or seeks) more penetrating or thoughtful probing; may include fore-thought or supportive information beyond mere opinion. (Criteria for "critical" need to be spelled out as sharply as possible.)

5. UNDERSTANDING OF OTHER (shows, seeks)

Shown in vigorous nodding of head or, preferably some further interpretation or elaboration or re-phrasing on the other's point. May also be shown by asking for clarification so that understanding of other is assured. Sought by requesting "feedback" from other as to whether originator's point is grasped.

6. ILLUSTRATION/APPLICATION (example) (gives, seeks)

Supplementing of information or interpretation by giving or seeking practical application of principle or point discussed. Often used or sought working toward clarification and understanding.

7. SOLIDARITY (support) (gives, seeks)

Complimentary statement or strengthening of a point is either given or sought. May take form of "favorable" gesture or phrase like "that's right" or "yeah." More often given than sought; sought when uncertainty is present. Often used with category #8.

8. AGREE-DISAGREE (agree, disagree)

Quite self-explanatory. Differentiated from "solidarity" and "understanding of other" as respondent will take the position of the other in agreement or the opposite in disagreement. However, may often be used with category #5 or #7.

9. TENSION (releases, shows)
(withdrawal--W)

Often produced by disagreement, lack of understanding, lack of direction in the discussion--resulting in participant's aggressiveness or frustration. Release through joke, irrelevant exchange (cf. category #11) or procedural suggestion (cf. category #1). Withdrawal refers to individual's dropping out of discussion, showing boredom, sleepiness, daydreaming, prolonged and aimless doodling, or any extensive non-participation.

10. (open category)

11. MISCELLANEOUS (LD-1,2,3,4,5,6; IE)

LD= lengthy discourse or explanation by an individual
IE= irrelevant exchange among participants
LD usually going on to point of halting normal discussion and interaction. IE often shown between a resolved discussion and next topic or procedural suggestion. Sometimes IE aids group solidarity.

12. UNRECORDABLE (all--9, none--0)

Category employed during group silence to show time span. Also used when interaction is too rapid or loud to be recordable.